

The Complete **ANDROID** Guide



Kevin Purdy

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[Acknowledgements](#)

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IT'S A
3ONES
THANG

Dedicated to Elizabeth, the best reason for constant contact, and
Richard, who always believed.

A Note on Android Versions, Hardware, and Rooting

On Versions



The Android Mascot, Next to his Cupcake, Donut, and Eclair Markers. Photo by [VDVsx](#)
(Flickr)

Google's Android operating system for phones is definitely a moving target. During the production of this book's first version, the latest Android version available on a cutting-edge phone jumped from 1.6 to 2.2. In that time, too, phones made by HTC and Motorola became exceedingly popular, and modified versions of the Android interface, HTC's "Sense" and Motorola's various "Blur" versions, have become the de facto standard for what a new Android buyer sees. Different phones have seen updates at very different paces, with some phone owners still loaded with Android 1.6 and wondering if they'll ever see a ping from out of the sky about a new version ready for downloading.

This guide was written with the newest version of Android in mind, running on Google's own Nexus One phone, though that changed

from Android 2.1 to 2.2 somewhere in the middle of the text. It was also conceived, at first, as focusing on a "stock," unmodified Android interface, though the significant differences in the HTC and Motorola home screens, and particular apps, are covered. In short, we tried to look forward and diversify throughout, but especially where a difference might matter.

On Hardware

As noted above, this book was written primarily using a Nexus One, which is fairly representative of today's Android phones, as far as that goes. It features a trackball, which does not appear on all phones, and lacks a physical, QWERTY-style keyboard, unlike the popular Droid models. The camera offers a 5 megapixel capture and has a flash, but can't shoot 720p video or let the shooter alter the focus with a touch.

In other words, your hardware will likely vary from any other Android owner's phone, but Android was meant to incorporate many designs and features without needing an entirely new system.

On Rooting

Android is based on the Linux operating system that powers huge server installations and individual computers alike. Inevitably, that means that computer and programming enthusiasts have sought to get deeper access to Android's internals--to become a "root" user--to both add creative new features, and fix those things that irk them about their phones.

This guide was not written with "rooted" phones at its core--but rooting isn't something to look down on, either. Coders and communities like those behind the [CyanogenMOD project](#) have unleashed nifty fixes and upgrades on modern phones, and given

the owners of phones left behind by their makers and carriers a new lease on life.

In a few cases, the answer to "Why can't I fix this?" may lie in rooting your Android phone--but be cautious, and do lots of research, if you choose to go that route. Altering your phone's core firmware will almost certainly void your warranty, and missing a step or using the wrong files can result in a phone that's "bricked," and can no longer function.

Meet Your Android

Android is a free phone operating system that aims to get all kinds of phones running like computers and, most importantly, connecting to the web. It's been developed primarily by Google, though others have helped, and it's a project that's constantly updating, growing, and getting a new look. In this chapter, you'll learn what makes Android different from iPhones, BlackBerry phones, and other so-called smartphones. You'll get a sense of why it might be right for your next phone (or other device), what you can do with it now, and where it's going in the future.

Say hello to your newest computer—the one that your mom can call you on.

The computer you carry with you

At its very core, Android is a version of the very free and open [Linux](#) operating system, but tailored for a computer that has just a few buttons and a touch-sensitive screen. It's not a single phone or line of phones, like Apple's iPhone, though the Verizon/Motorola [Droid](#) model might make you think that. It's not even a single look for a phone, as manufacturers and cellphone companies can totally remake the interface however they'd like. At the moment, learning how to get at the good stuff on one Android device generally trains you to use them all, but that may change in the future. Put simply, Android is a bundle of code, mostly developed by Google, that allow phones with small screens and tiny chips to do great things.

What it can do

What kind of things? If you're showing off your Android phone to your friends, you might show how you can hit a microphone-style button, say "Pizzeria Due, Chicago" into your phone, and, a few seconds later, have links to call, get directions to, or view the web site for one of Chicago's best deep-dish pizzerias. You can have the My Tracks app follow you via GPS and record your progress on a map, or in a spreadsheet. You can listen to your MP3s or streaming podcasts, read and respond to emails, and get turn-by-turn directions as you walk around a city you don't know—all at the same time. If you can't do something, there's a good chance an app in the Android Market can do it, and you can download it at any time.

Sure, you can browse the web, make phone calls, and send text messages (or SMS, for the purposes of this guide), but you can do that on most any phone these days. What makes Android different are a few features baked into its core:

- **Sync with Google:** It's the first thing you do when you turn your phone on for the first time—sign into a Google/Gmail account, or create a new one. From then on, your contacts, Gmail, Google Calendar, browser bookmarks, and even your wallpaper, phone, and search preferences are backed up and constantly streaming between your phone and Google's servers. You never need to plug your phone into, or "sync," with a computer, if you don't want to—your phone is its own computer. Not every Android phone must sync with Google, but the vast majority of them do—it's a prime selling point.
- **True Multi-tasking:** This is the big difference between the Android and the iPhone, and it's an even bigger leap forward from the clamshell/"candybar" phones sold by U.S. cellphone carriers. Android phones can keep multiple applications of any kind loaded at once, so you can switch between Facebook, email, SMS, and other apps without losing your place, and allow them to quietly do small things in the background. Applications written for Android phones can also synchronize with their servers and run little tasks in the background, without having to

be actually open. The latest iPhones can let applications keep certain features, like music or message watching, open in the background, but Android allows app developers a lot more flexibility. iPhone applications can work around their limitations with pop-up "push notifications," but that involves their own servers pushing a message to your phone over the wireless internet, and they often charge for it.

- **Get totally customized:** Don't like the way Android's icons, widgets, and interface buttons look by default? You can change them. You can easily change your background wallpaper to any picture you want. Themes that provide total graphical makeovers are available, both free and for a small fee, in the Market app included on your phone. The entire home screen interface, in fact, can be replaced entirely with neat apps like [SlideScreen](#) or [Launcher Pro](#), and if you don't like your SMS app, your phonebook app, your dialing app, or anything else for that matter, you can replace it!
- **Use open software:** Android itself is open-source software, meaning that anyone can look at how it works and make it better, or just different. Not everything is free and open—you can't (normally) copy applications between phones—but application makers can do a lot more with your phone than on other platforms.

What it can't do

Run the iPhone's apps: The iPhone was the first major smartphone intended for personal use, and it has built up a catalog of thousands upon thousands of third-party applications since early 2008. Many of the most popular and clever applications have made their way to Android's Market, or someone's made a very close copy. Still, experienced iPhone users coming to Android often have to live without an app or two they really enjoyed, but can often make peace with a work-around or almost-there app.

Work with iTunes (officially): There are applications like Songbird or doubleTwist that can put your iTunes music playlists on your Android phone, but Android phones aren't officially supported by iTunes itself—and, most likely, never will be.

Work with Niche Corporate Servers: The latest versions of Android support Microsoft's ActiveSync, part of Microsoft's Exchange server platform, and if you can get your company email working on any other app or phone, you can likely get it working on Android. The exception is for certain proprietary email models, and certain uses of the BlackBerry platform. In other words, if you work for a corporation that doesn't really trust its employees to get at their email except on the apps and phones they hand out, you might run into problems.

The Android Learning Curve

Android is a very young phone operating system, and it comes with a few new features and concepts that take some getting used to.

Your emails, SMS messages, and other background notifications pile up on the **notification bar** that's almost always at the top of your screen, and you "pull" down on it with your thumb, like a window shade, to see more details and click on a notification to access the app. Applications don't automatically get a shortcut on your home screen, but can be accessed from a **tray** sitting at the bottom of your home screen which you "pull" up on to access (Android 2.1 & below) or by pressing the center icon between your phone and browser icons at the bottom of your screen (Android 2.2) . You can access a **universal search bar** from any screen, and the **four main buttons** have distinct purposes, but they do slightly different things, depending on what you're doing. Most importantly, you don't, at the moment, sync your phone through a primary computer application that handles all your music, pictures, videos, and applications. You drop it all on your phone's **microSD card** from any computer, and your phone picks it all up from there.

After a few days with an Android phone—I'd say about a week of inquisitive use—you'll probably get used to how Android wants to get your data to you, and how you can get at the things you want. Want a little help with some of the particulars? Want to see if making the Android switch might be worth your time and money? Good thing somebody wrote a book about it, I guess.

Get Started with Android

Break open the box

Depending on what Android phone you purchased, you'll have different accessories inside the shiny-coated box. When you've got time and a clear space to open it, get a good whiff of that New Gadget smell, then extract your phone and its wall charging cord or USB cord. You *should* connect the small plug to your phone and plug the other end into your wall or computer for a good long charge before turning it on. But, knowing you, you'll want to get started, right? Just make sure it's plugged in while you run through the initial setup, so the uncharged battery doesn't give out during your first setup, and that it gets at least one overnight charge before you plan to take it out and about.

You'll also want to make sure you're somewhere with decent cellular signal, and probably a Wi-Fi signal you can connect to, as backup. The Google login/setup process, for phones running Android versions earlier than 2.0, requires a cellular data connection. On phones running Android 2.0 and later, you can choose to connect with a Wi-Fi signal. Until someone at Google decides to be kind to the folks in North Dakota, you generally can't set up your phone without some kind of data connection.

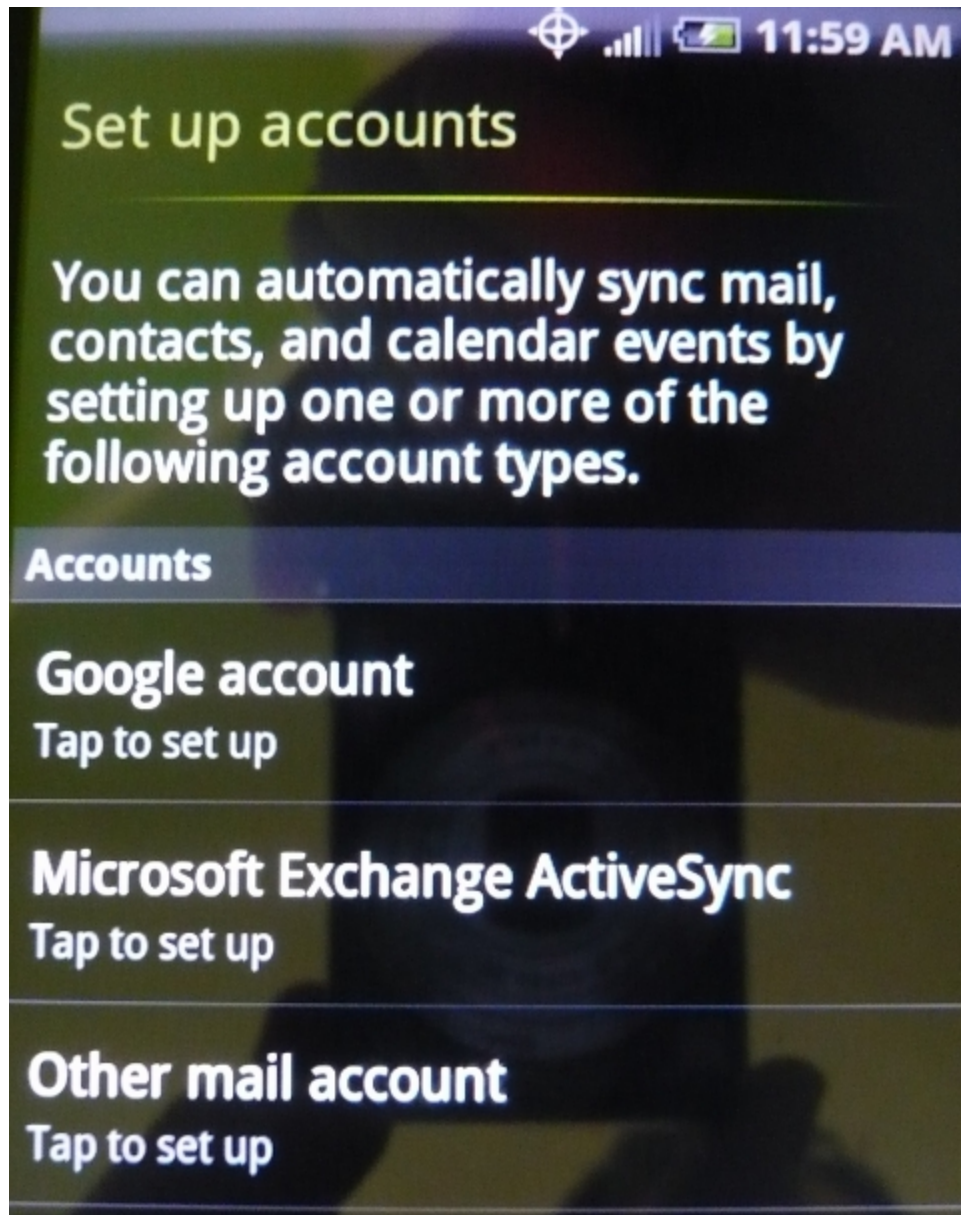
To readers in Bismarck—I'm sorry. That was a cheap, lazy association. I owe you all a beer the next time my plane breaks down over or near your state.

Once you're plugged in, and pretty sure you'd have a good connection, press and hold your phone's power button for a second. It's in a different place on many phones, but looking for a red button on your phone's main set of buttons, or on the top left edge, is

usually a safe bet. Your phone will run through its boot screens, showing off your cellular carrier and the Android logo. When it's done booting up, you'll be greeted by a little green Android friend, whom you'll touch to start the login process.

Logging into a Google Account

The first thing you'll see is a long license agreement, which basically states that you won't hold Google liable if something goes wrong with your phone, or it wants to start a nice game of Global Thermonuclear War (what's Matthew Broderick up to these days, anyways?). After you've hit "Next," you'll be asked to either create a "Google Account" or sign into an existing account.



Setting up your Google Accounts and Exchange/Other Email Accounts

If you've ever signed into Gmail, Google Docs, Picasa Web Albums, or any other of Google's services, you have a Google Account you can sign into. If you have a Gmail account, that's your username and password, and you don't even need to type the "@gmail.com" portion. If you have a Google account, but don't use Gmail, the username is likely your primary email address.

Can't remember your Google Account details? Fire up your desktop or laptop computer, head to google.com/accounts, and click the "Can't access your account?" link under the sign-in boxes. You'll be asked a few security and verification questions, then you'll be allowed to reset your password from an emailed link.

Don't have any kind of Google account? You *could* create one from your phone, but it's easier to create a new Gmail account on your main computer and use that to set up your phone, even if you plan to keep using your existing email address. Why? Once you have a Gmail account, it's the only username and password you'll need to log into all your Google services. As for the email you're not giving up, it can be piped into Gmail and used with your Android phone's very awesome Gmail app. You still get your mail, your contacts and old mail can usually be transferred, and you still send out mail from your existing address. It's win-win for you and your phone.

On some phones, you'll also be offered a chance to set up your other email accounts, or Microsoft Exchange access, so that it's up and running right from the get-go. These steps are optional, though, and you'll still be required to create or sign into a Google account to get up and running.

Setting up Gmail with your own email If you've got a tried-and-true MSN, Yahoo!, or other email address that you don't want to give up, you can keep it and still use Android's very powerful Gmail app to access it, rather than using the quite-less-awesome "Email" app. Bonus feature: Gmail's web interface is probably a lot better than your own email's webmail page, so you get a great way to access your email when you're away from your home or work computer. The step-by-step has already been run down by Gina Trapani (who is, incidentally, the author of [The Complete Guide to](#)

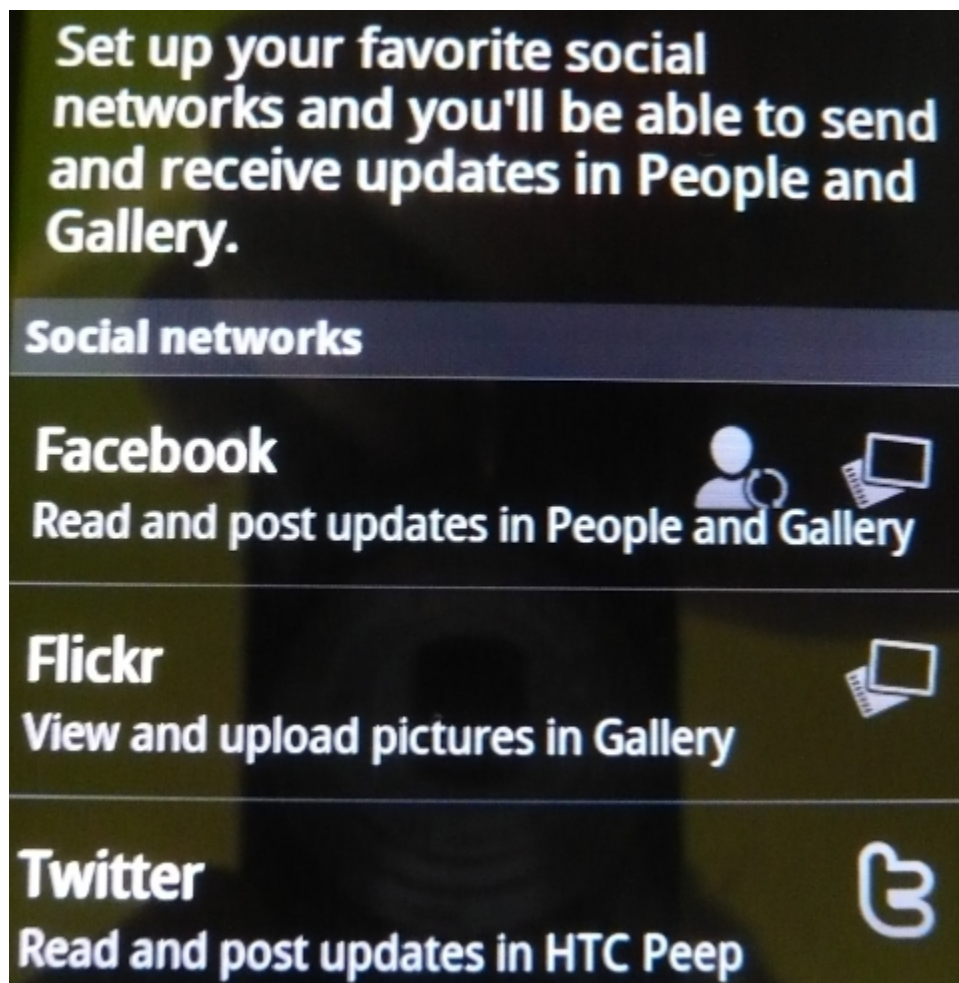
[Google Wave](#)). Check out Gina's feature on [consolidating multiple email addresses with Gmail](#) at Lifehacker, a blog at which your editor is a contributing editor.

All set? Go ahead and sign in. If you have the password right, you'll see a screen showing that your phone's "Signing In" and that it's "Communicating with Google's Servers." If it takes longer than five minutes, go ahead and hit the "Cancel" button, then get somewhere with better cellular coverage. If you're setting up a newer (Android 2.1 and above) phone, you can connect to your home Wi-Fi network instead and connect through it. If it does go well, you'll see that "Your Google account is now linked to this phone," and get some text providing a really basic introduction to features like the "Status bar," by which Google actually means the Notification bar.

If you're using a newer Android phone, you may also be asked to allow Google to back up your phone settings. That means your wallpaper preference, certain application settings, and other data. You'll probably be getting another phone in a year or two, and if it's an Android phone, it makes sense to keep this checked.

You'll also be asked during this setup process to decide on a few options related to Google's location services. By default, the boxes are checked and your phone will send its location—gathered from your Wi-Fi network, GPS device, and/or cellular tower triangulation—to Google in the background. Google uses that data for determining how fast traffic is flowing on major streets, among other uses. Another check box decides whether Google can collect your location data when you specifically want it to, for localized search results, driving directions, and other map-y things. If you're cool with what Google wants to peek into, leave the boxes checked; if not, you won't suffer all that much for your privacy, but consider keeping at least the second box checked.

Finally, some carriers add a few other options for account integration just before the setup process is done:



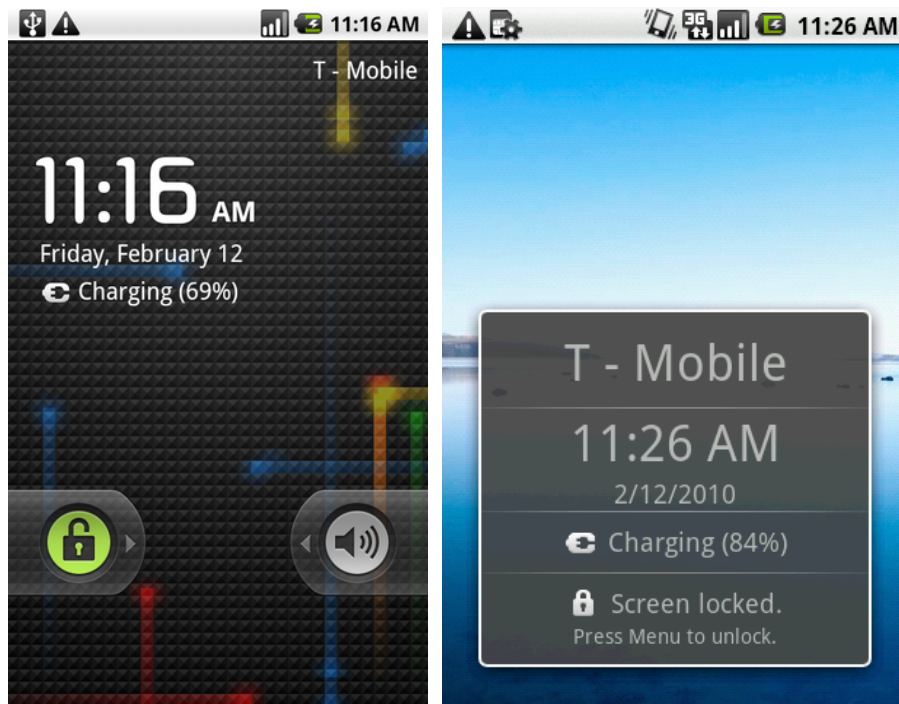
Linking Social Media Accounts

Again, you can easily skip this step and set up these accounts later in your phone's settings, but it's fairly easy to do from this screen, too, while you're in a "Here's my password" mood.

Hit the "Finish Setup" button, and you'll arrive at your phone's "lock" screen—it's what you'd see if you woke up/turned on your phone after a few minutes in your pocket. On a new stock Android phone (pictured below at left) and some Motorola models, you'll see the time, date, and battery amount charged on the screen. In the upper-right corner, you'll see the cellular carrier your phone's detecting, but

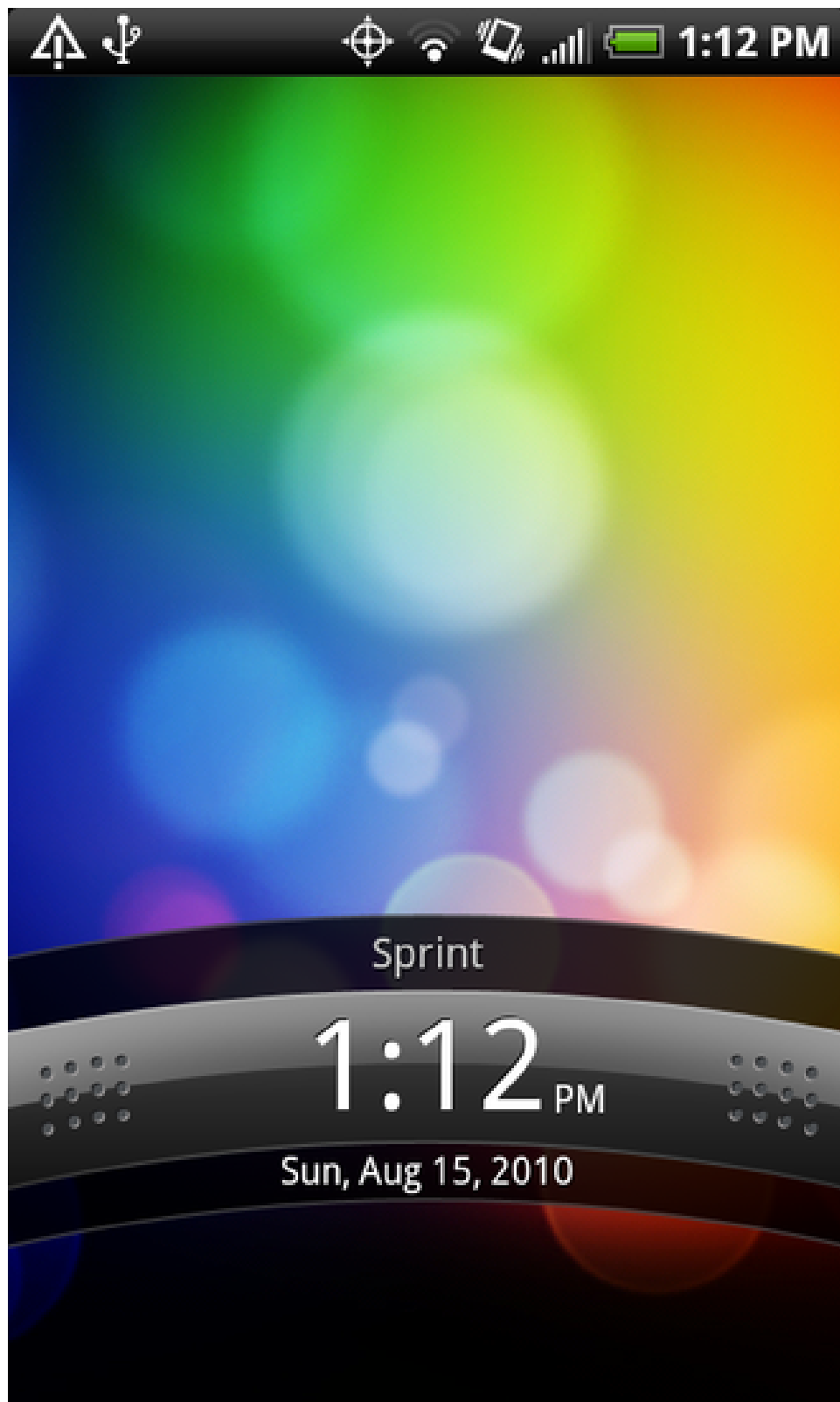
don't freak out if it's not what you expect—that can change depending on your geographic location. In the lower third of the screen, you'll see lock and speaker icons. Swipe the lock toward the right to head to your phone's home screen. You could also swipe the speaker icon toward the left if you wanted to mute your phone's sounds at the movies or other quiet moments, then swipe it again to turn sound back on.

On phones with an older version of Android, you'll see a menu similar to the one below at right, showing the same kind of basics. Hit the Menu key—which either says "Menu" on it, or looks like a short stack of horizontal bars, to head to the Home screen.



Android Home Screen

On an HTC phone, the lock screen is slightly different, and the action to "unlock" your phone is to pull the gray bar down:



HTC Lock Screen

After you've got your phone set up and unlocked, it's time for the fun to begin. Not that reading about email setup and account privacy wasn't fun, am I right?

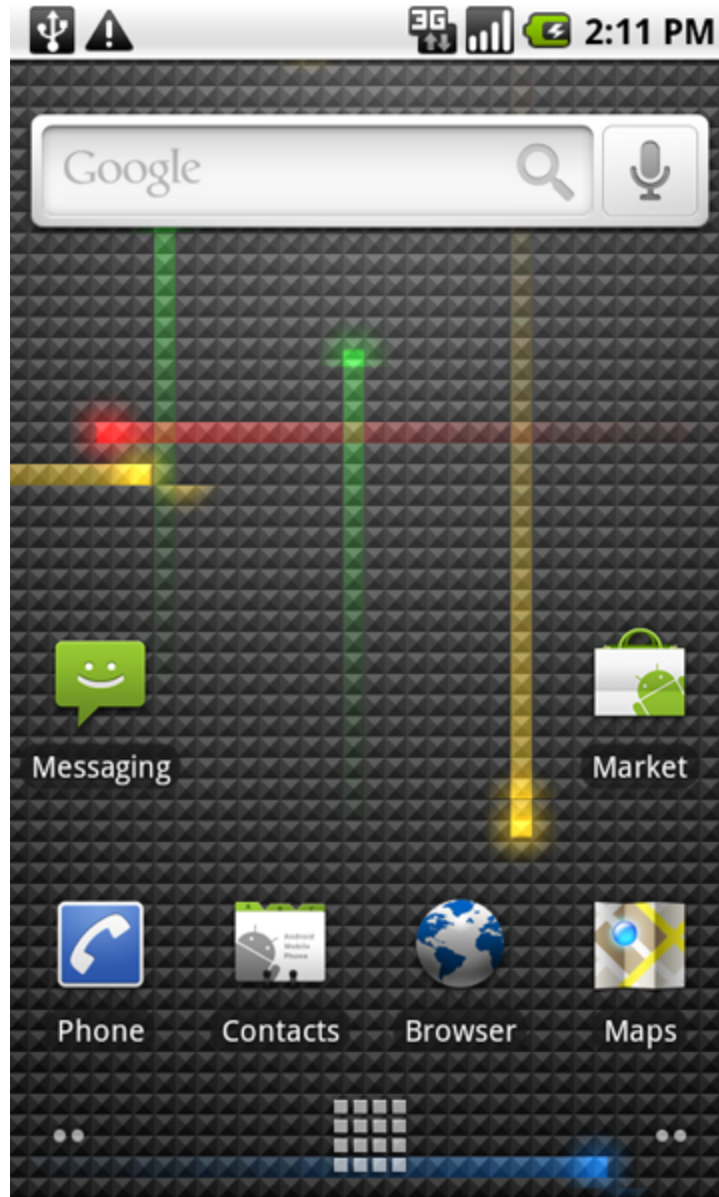
The Home Screen

Not every Android's home screen looks the same, but they all work in mostly, pretty much, kinda the same way.

Phones with Google's own Android system and no customizations added on—increasingly a rare thing these days—all have the same look and feel. The majority of manufacturer HTC's Android phones have a "Sense" interface, which adds a good deal of social networking and redesign work to Android's home screen and many of its apps. Motorola's Android phones have varying levels of customization built into them, though they hue closer to the stock Android screen than HTC. There are other phones with their own unique interfaces, some that don't look anything like Android at all. Here, we'll cover the aspects of the Home screen that are universal, along with some of the specifics from HTC and Motorola phones.

Here's a look at the home screen, as it first looks, on a newer Android (2.1 version) phone, booting up for the first time. There are little trailing lights moving up and down, left and right. Despite your every human instinct, ignore them. For now, we're also not paying too much attention to the bar at the very top, which holds a bunch of icons showing your phone's status, and whether you've got notifications waiting for you. You're probably not seeing the icons you see here on the left edge, either, but that's fine—that's just how I got these screenshots.

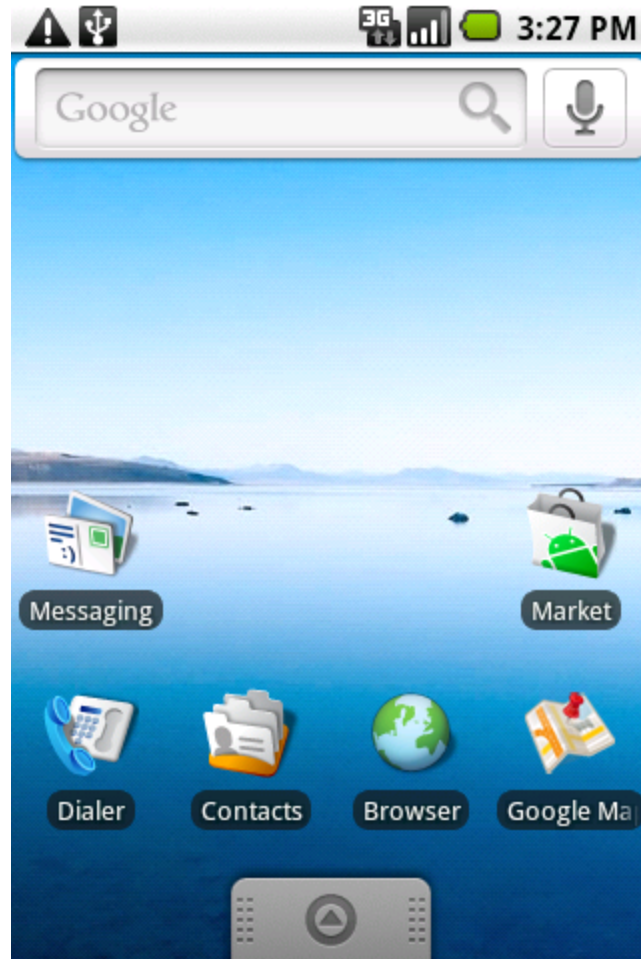
Exploring your home screen(s)



Android Home Screen

Okay, so, you touched one of them, and you saw a few more shoot out. Now stop touching the screen. Okay—*now* stop.

If you had an older Android phone running the 1.6 version, here's how it would look:



Android Home Screen 1.6 Version

You'll see it's much the same as the 2.1 version, just with a different look and feel (and default background image, but that can be changed).

If you're rocking an HTC-made phone, your home screen is, well, almost entirely different. Boot up a brand-new HTC EVO 4G, for example, and you see something like this:



HTC Model Home Screen

On a Motorola phone, like the Droid X, your home screen looks fairly similar to Android's stock version, with a few cyborg-themed tweaks:



1:40

See all your apps.
Touch the Launcher icon.



1 of 6



Text Messa



Browser



Market



Voicemail



Motorola Model Home Screen

And if you've got a phone rocking Android 2.2, like my Nexus One, it's slightly different from the 2.1 screen shown above:



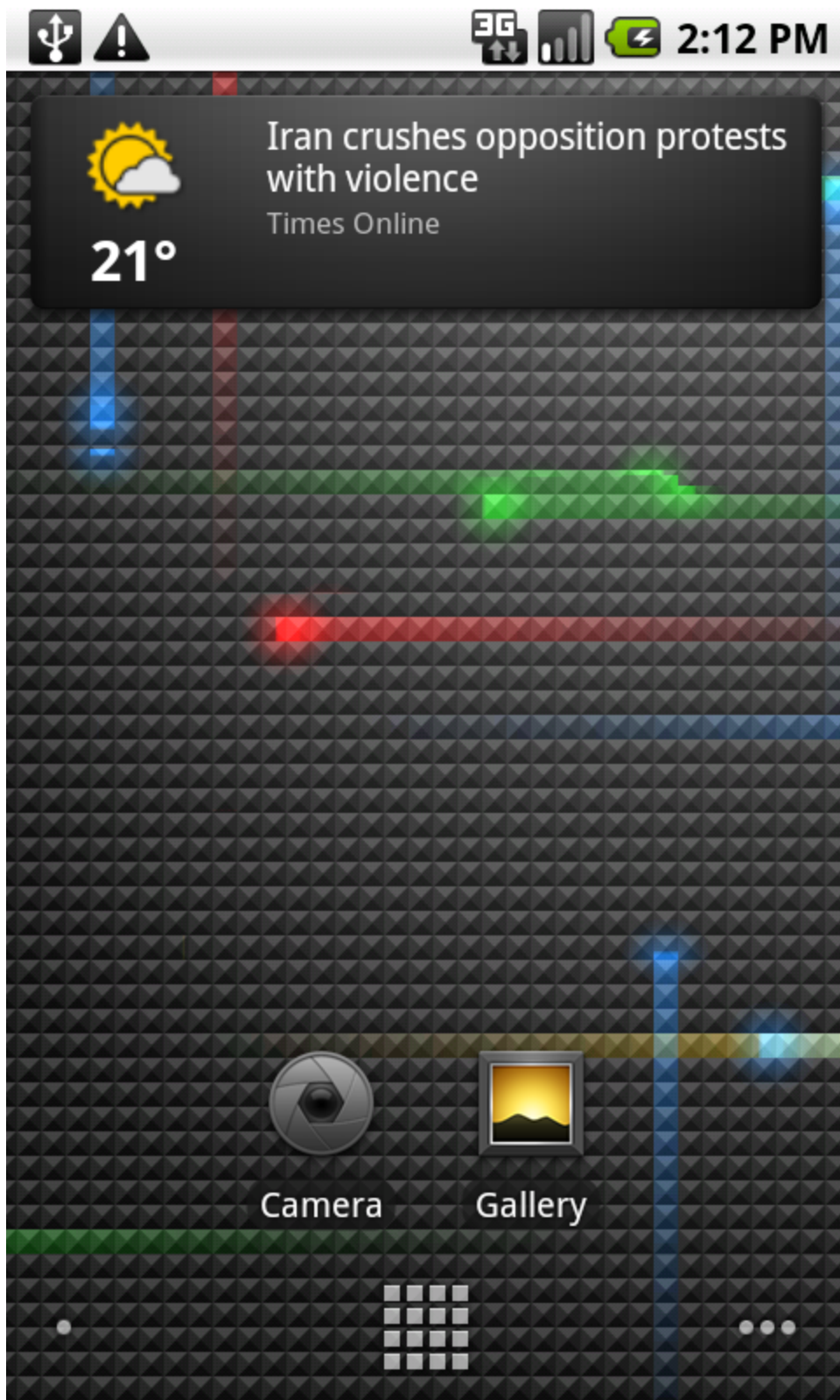
Android 2.2 Home Screen

Important note: The calendar item shown above is from my wife's calendar. Not that there's anything wrong with Elizabeth Gilbert's tale of self-discovery. Or Julia Roberts. Ahem.

From here on out, we'll be sticking to an Android 2.1 phone for a guided tour of your home screen. Your own Android phone will operate in the same way, though, but we'll note where an HTC or Motorola phone does differ significantly.

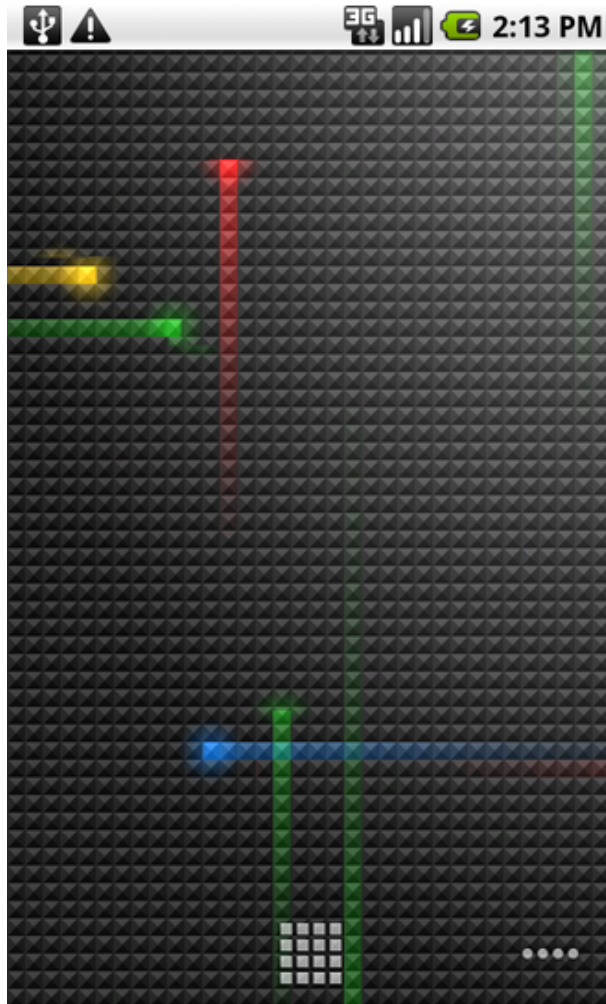
Getting Around Your Phone Home

The home screen you see when you first turn on your screen isn't all the space you have—it's just the center. Using a thumb or finger, swipe your screen toward the left, as if you were holding a deck of playing cards and swiping the top card to the right.



Home Screen 1 of 4

Notice that the very top portion of your screen stays the same, with notifications on the left (which we'll get to) and phone status icons on the right, but there's a different set of icons and widgets on this page. The view of the background image has shifted, too, but it's hard to tell with this default. Go ahead, swipe to the left again, if you can:

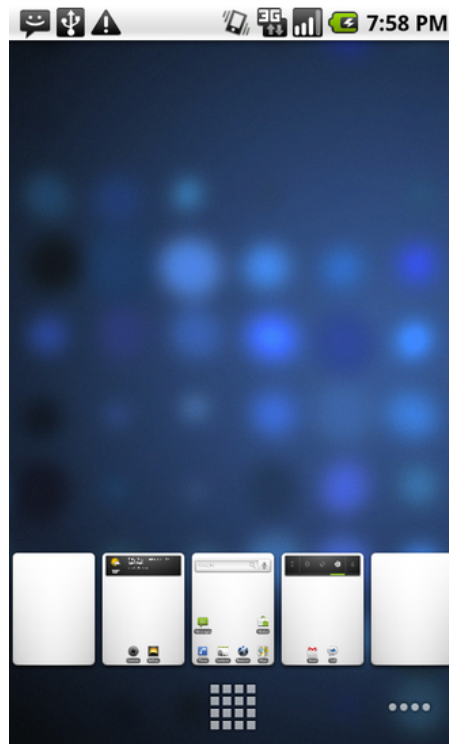


Empty Home Screen

Drat, nothing new here—at least on my phone. Look on the bottom, though, to the two icons. The middle is your application tray (or "drawer," as some phone makers call it). HTC phones keep their app trays in a left-of-center button on their bottom widget. Meanwhile, an icon on the right shows that you've got four screens to the right you can swipe over to. You get a total of five screens to play with in Android 2.1 and beyond, while older Android versions have three.

Some phones get two or four additional screens, and there are apps in the Market that can add even more screens, if you'd like.

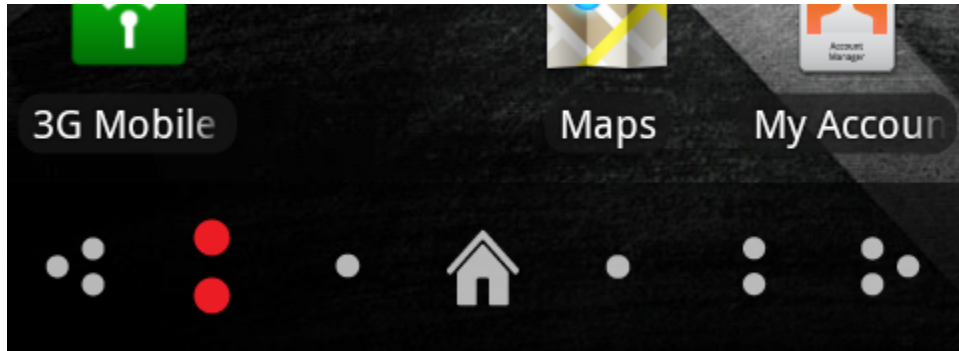
Newer Android versions (2.1 and later) also have a helpful navigation feature. Want to see what's over to the right of the first screen we started on? You *could* swipe over two more times, or—or!—you can press and hold on that little four-dot symbol in the bottom right corner.



Home Screens Laid Out

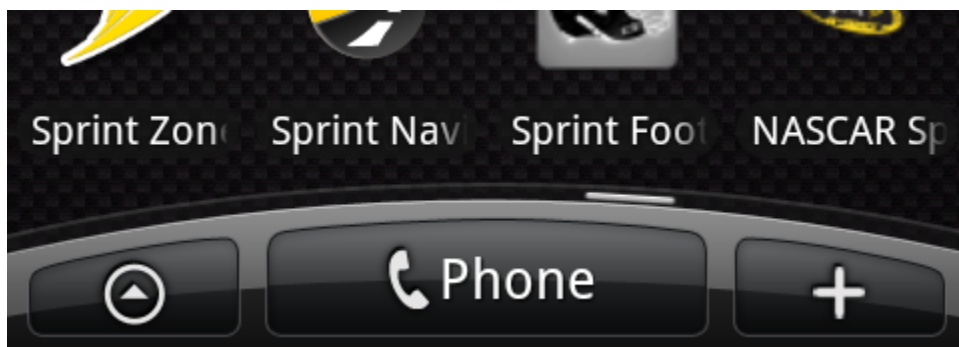
Neato. It's a glimpse at all the screens available on your phone, with the backgrounds removed and replaced with white. In reality, you probably won't use this feature very often, unless you train yourself to do so. Most people are just fine swiping from one screen to the next, even if the shortcut or widget they're looking for is four screens away. Still, it's there if you know you have to go from screen one to screen five.

Motorola's newer phones show a similar kind of where-you-are indicator, but you can also tap any of the icons to zoom straight to that screen, or slide your finger along the icons at the bottom to quickly zoom through your home screens. We have to admit, it's a battery-killing blast to do this.



Motorola Home Screen Navigation Buttons

HTC's Sense phones only show a speedometer-style nodule to show where you are on your home screens—look for the little white bar to the right of center in this screenshot:



Your Home Screen Location is the Little White Bar on an HTC Phone

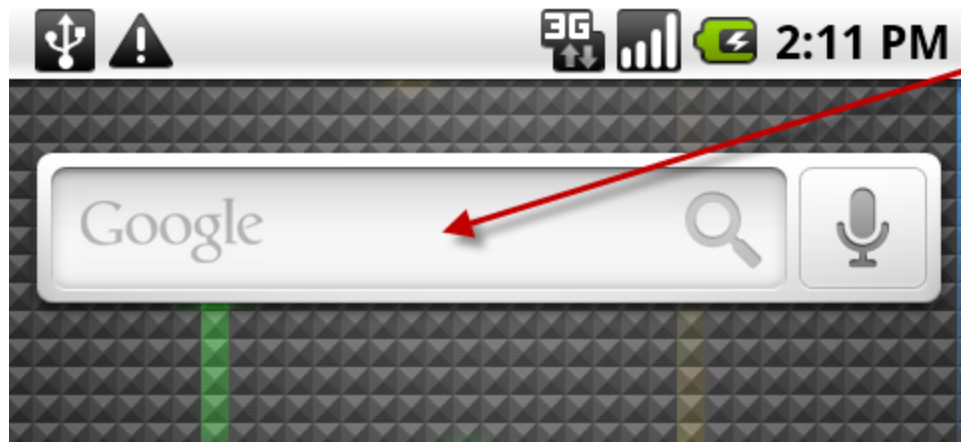
HTC owners can also tap their Home button once to get back to the center home screen and then, while on that central point, tap their Home button again to get a display of all the home screen panels and their contents:



Double Tap Home Button on HTC to View All Home Screens at Once

No matter who made your phone, the bottom "tray" stays the same on every home screen. The actual items on your home screens, though, can definitely change. Let's look at the other three main components of an Android setup.

What's On Your Home Screen: Widgets, Wallpaper, Apps, and Shortcuts

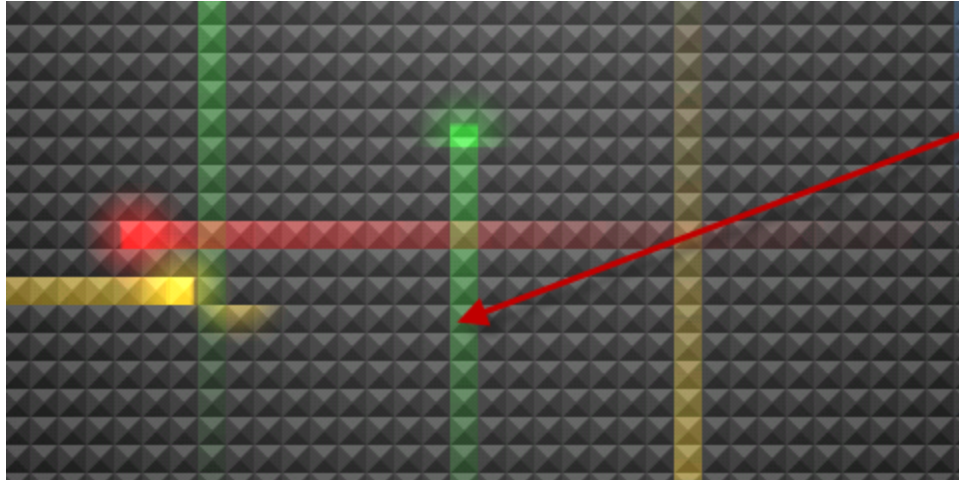


Google Search Widget

This bar that nearly spans the screen, up at the top here? It's a **widget**. You may have heard this software term used with other devices, or even your own Mac or PC computer. A widget is basically something you stick to a particular point on the screen, where it sits and waits for something to happen. That something could be you clicking a button, like that little microphone indent on the right. It could be entering text, which the bar that's filled with a shaded "Google" and magnifying glass icon is waiting for. Or, in some cases, a widget just keeps track of something and shows it to you, like the current temperature, the number of programs running, or whether you've got the Wi-Fi, GPS, or Bluetooth enabled on this phone.

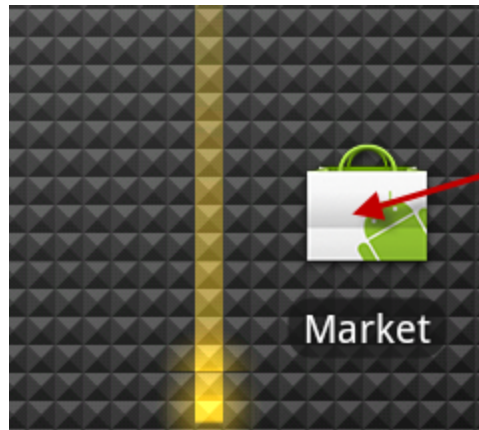
In this particular case, Google's pre-loaded their "Search" widget on your phone's primary home screen. HTC, Motorola, and the carriers that sell phones usually add many, many more widgets to their home screens. In Google's case, the central Search widget makes sense, given what it does (find apps and contacts on your phone, and search the web) and the firm's business model (get more people on the web and get them searching, so they'll encounter ads). You can click inside the big bar on the left to enter text, or hit the microphone

on the right to speak your search term. We'll dig more into what the Search widget can do later. For now, let's keep heading down the page.



Live Wallpaper

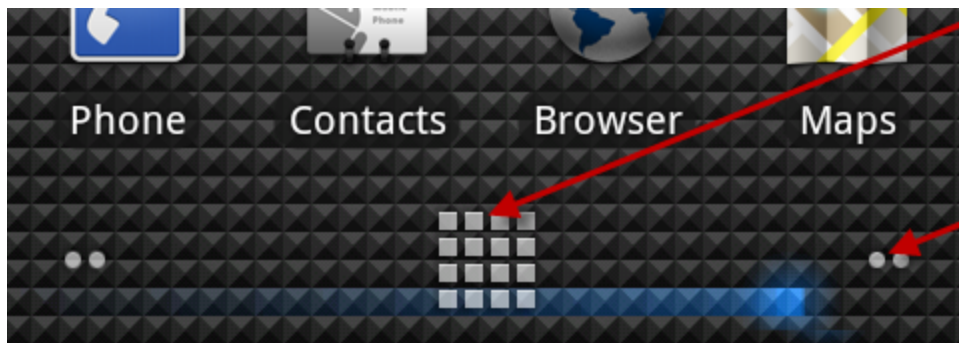
Behind that widget, and behind most everything on your screen, is **wallpaper**. In this case, it's a "**Live Wallpaper**." Little lights are traveling around, making your screen look like a window to the insides of some *Tron*-like mega-computer. If you don't like this kind of cold, digital display facing you every time you pull out your phone, there are falling leaves, blue skies, tropical beaches, and many more available. Oh, and you could also put just about any picture that fits in there, too. Changing this, and the rest of your home screen, is coming right up! In the meantime, let's get to more fun stuff.



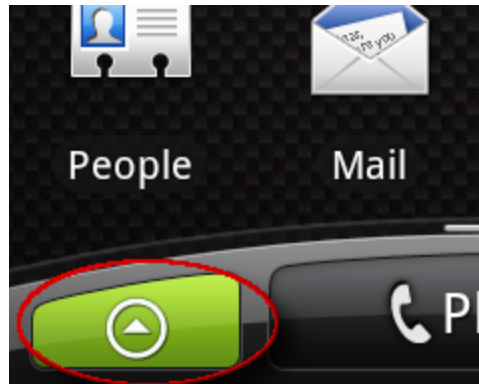
Shortcut to the App Market

Most everywhere on your center home screen where there aren't widgets, there are **shortcuts**. They're just like the icons on a computer desktop—they can be a link to launching an application, or a folder containing other shortcuts. You can't put files and documents on your home screen, but you can link to them.

You can also create shortcuts that quickly dial or SMS a friend, pull up directions, and start playing a music playlist, but, again, we'll explain that together with the wallpaper very, very soon. Soldier on to the icons at the bottom of your screen.

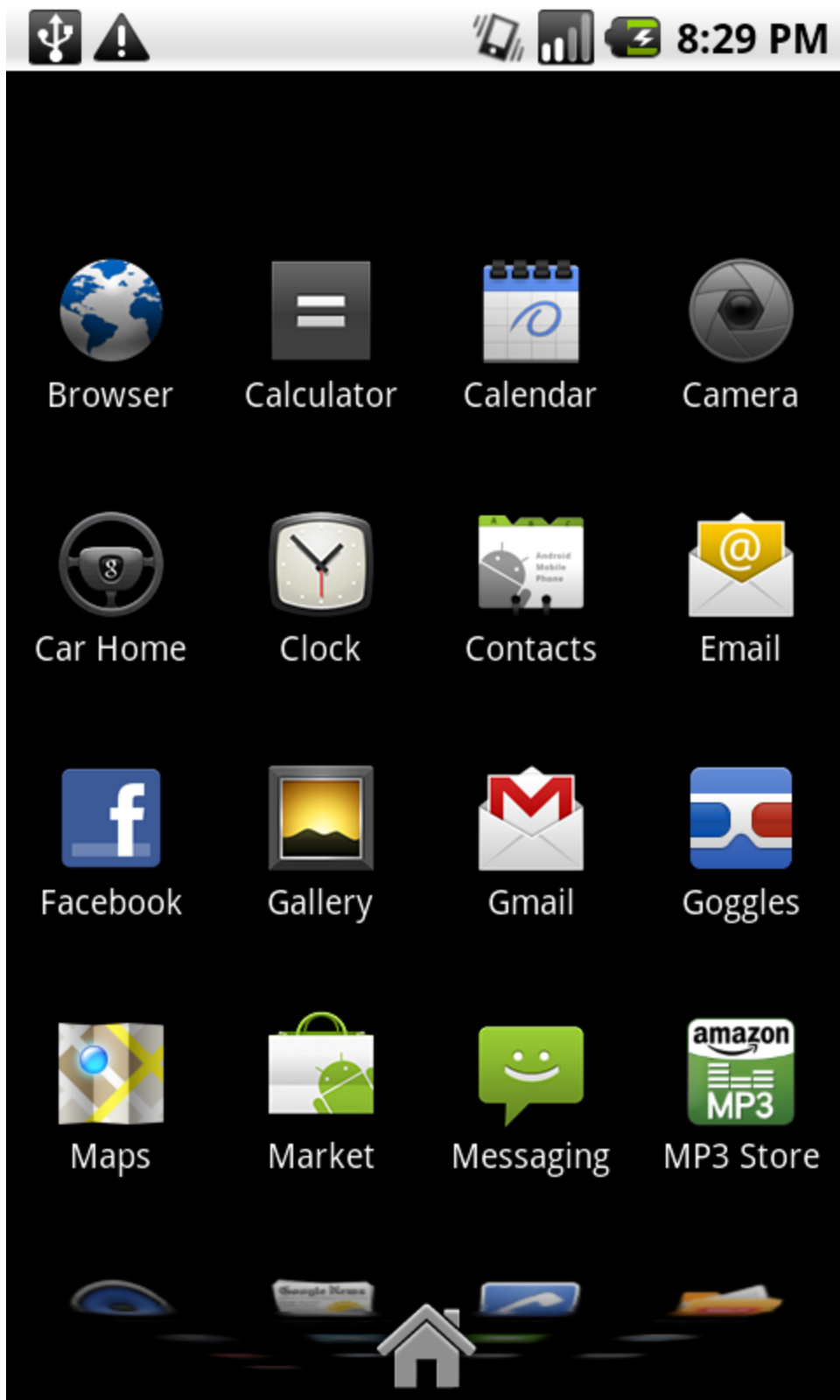


Applications Button



App Tray on HTC Models

We went over the navigation buttons on the left and right sides—they show what screens are on either side of the one you're looking at. Then there's the middle icon, the grid of squares (or metallic tab, on older version). That's where all your **applications** are kept. What are you waiting for? Go ahead and tap it (or slide it up on older versions). On HTC phones, your applications are stashed in a button on the left, with an upward-pointing arrow. On some Motorola models, tapping the Home button while on the center home panel also brings up a list of apps:

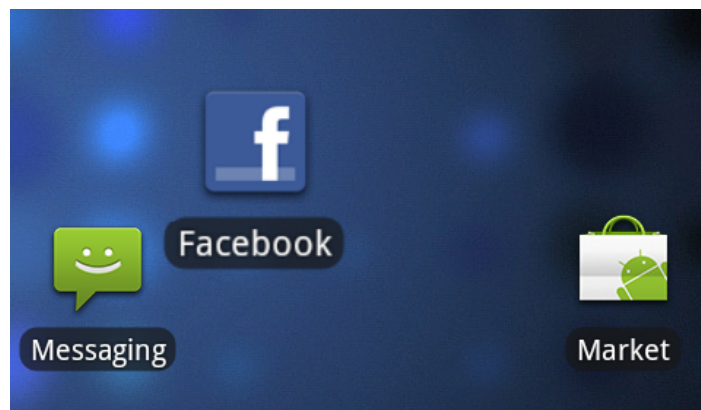


All of Your Applications

Here's where you can get to pretty much everything you'd want to use on your phone. The default applications you'll find in here when first firing up your phone will differ, but the basic list is much the same. While you've got this "tray" open, you can slide your thumb up and down to scroll through your full app list, or, if you've got it, use the trackball for slower, row-by-row pacing. If you want to head back to the home screen, simply tap the home-style image at the bottom, or you can hit the Back button on your phone—it's a left-pointing arrow, and it may be either an actual physical button, or part of a little touch-sensitive square in a strip of black. Take a look at what you've got.

Add and Remove Shortcuts and Widgets

See something you like in your app list that you'd like on your Home Screen? Facebook, perhaps, or maybe the straight-up Music player. From here, we can add any app that you'd regularly click on to one of your home pages. Press and hold your thumb on its icon. You'll feel a slight vibration, the "tray" will fold back down, and a slightly magnified icon will stick to your finger, as long as you keep pressing on the screen.

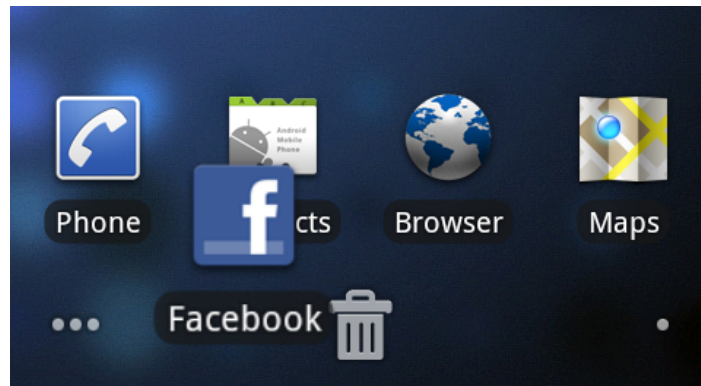


Moving an App Icon

Move your app icon to a spot on the screen that doesn't have an app icon or widget already on it—like, say, the space between the

"Messaging" icon and the search bar—and let go. Boom! There it shall sit, waiting for you to click it.

Want to move that app, or any app, widget, or shortcut, somewhere else? Press and hold down on it, wait for the little vibration buzz, then drag the icon where you want it and let go.



Deleting an App Icon or Widget

Want to delete an app icon or widget? Press and hold, then drag it down to the spot where the app tray icon used to be, in the bottom center of the phone.

The app tray icon becomes a trash can when you're dragging icons around. Drag an icon from your screen onto it and let go; it actually doesn't get *deleted*—it just goes back to the app tray. So that's one nice thing about your Android home screen: you can always set things back the way they were, and you can't really hurt anything.

All of the above functions work the same way on all your screens, by the way. That gives you 80 slots for icons (and a few two, three, or four-slot widgets) on a newer Android phone, and 48 on an older, three-screen phone.

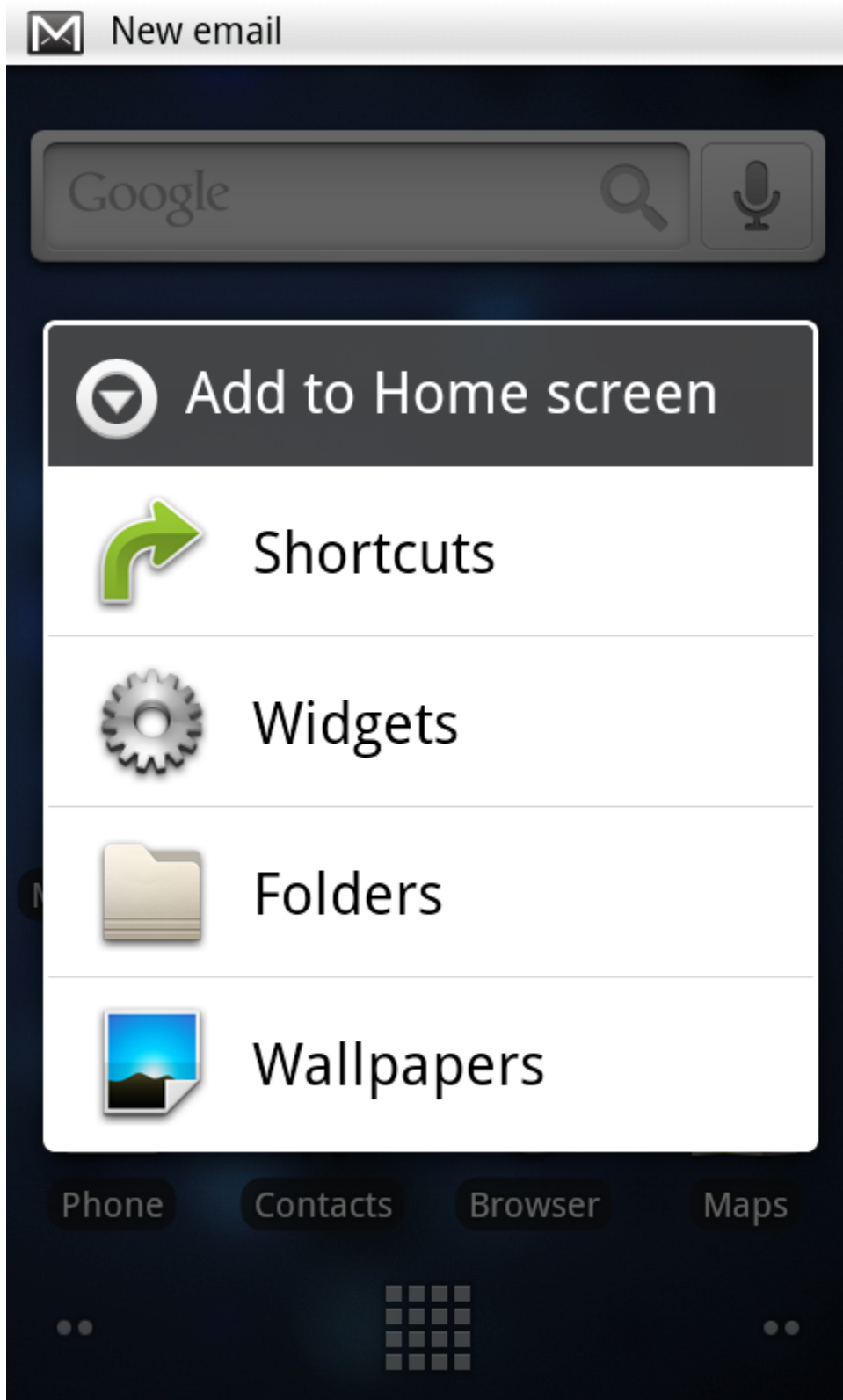
Take some time and play around with placing your favorite and most useful icons where your thumb can find them. We'll add more applications a little bit later, but for now, just see what works for you. When I'm playing with a brand-new Android, I tend to remove the

Phone icon, because it links to a different section (the dialer) of the same basic phone function as Contacts, and I tend to call contacts more than dial numbers. I also add my wife as a direct contact, add a Google Calendar widget to the center of my main home screen, create a folder for all my work bookmarks, and change the wallpaper, as you saw in the last two shots.

Oh, wait, yeah. Here's how you do those things.

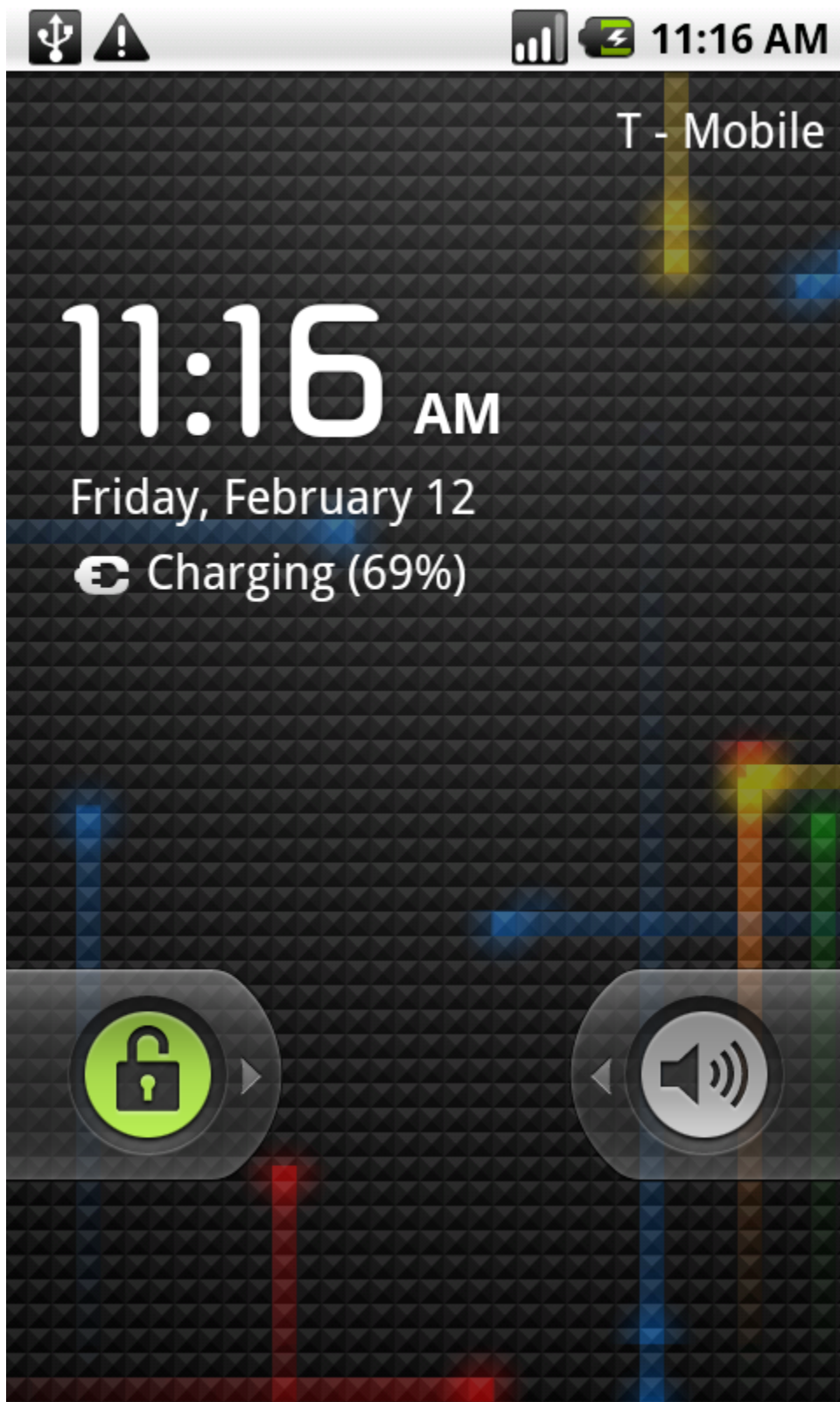
Change your wallpaper

Let's tackle the easy one first. Just as you would "press and hold" to move an icon, press and hold down on a portion of the screen that doesn't have anything on it, and you'll see a menu pop up similar to the one here:



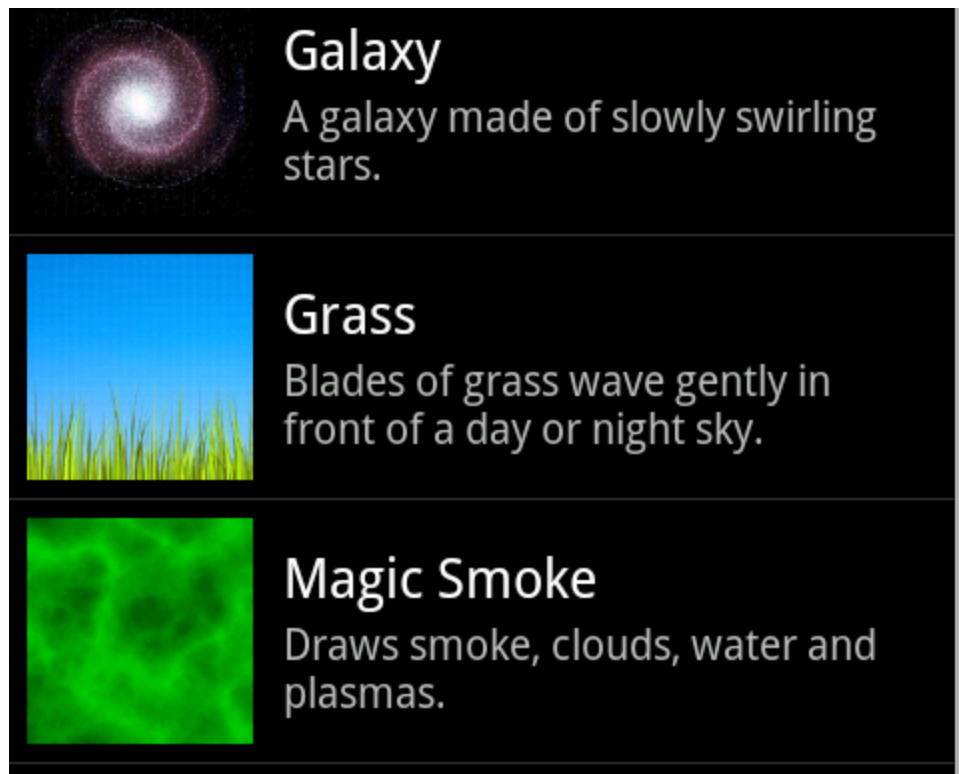
Home Screen Menu

Shortcuts, widgets, and folders—oh, my. Right now, though, let's just press on Wallpapers.



Wallpaper Options

Now it wants to know where you want to pull that wallpaper from: Gallery (photos from your phone's storage card and camera), Live wallpapers (the built-in images that move and change with time of day), or Wallpapers (the built-in images that don't move). When you get some cool pictures onto your phone, you can dig through the Gallery. For now, tap to peek into the Live wallpapers.

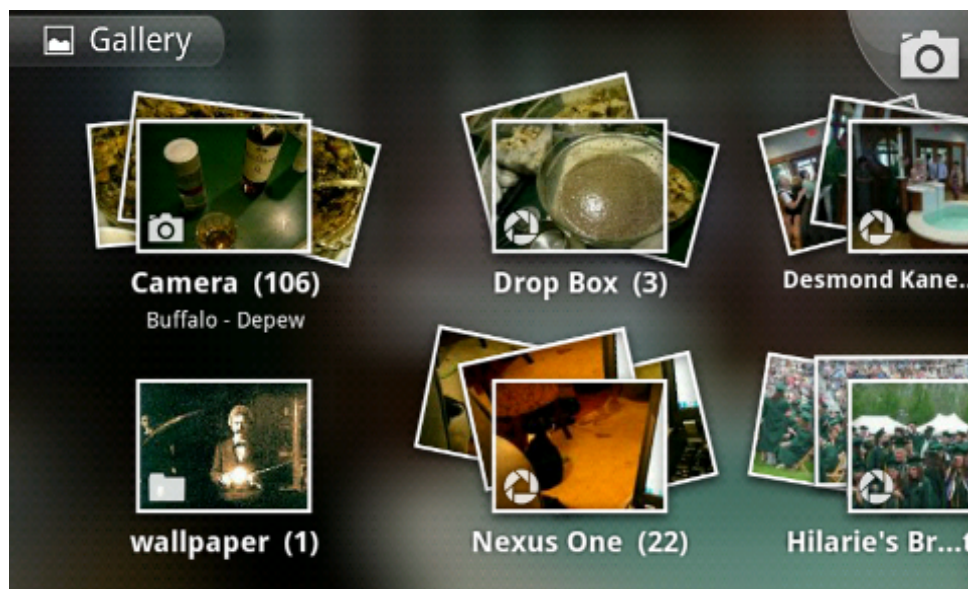


A Few Live Wallpaper Options

As you might guess, some of these are really cool features for a phone, but they can also be battery hogs. Still, if you like the idea of a lively phone, choose one of these wallpapers. When you do, you'll see a preview screen, and you might also see a "Settings" button in the lower-right you'll want to check out, so you can have your setup just so. If none of this fancy stuff appeals to you, hit the Back button once or twice, and you'll be back on the home screen.

Press and hold again, choose "Wallpapers," and look through the selection of just plain old "Wallpapers." Some of them are pretty darned nice, and they've covered just about every color. If you've

jumped ahead and taken a few pictures with your camera, or transferred a wallpaper-worthy image to your camera's SD card, go ahead and select "Gallery" when asked where to select your wallpaper from. You'll see your photo gallery pop up, organized into folders and albums, after a second or two. Turn your phone sideways for an easier view of what you've got available.

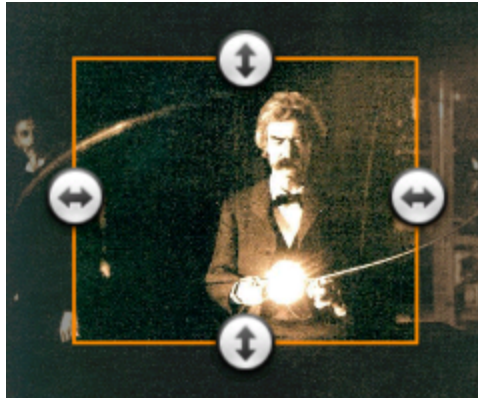


Still Wallpaper Options

Unless you're already an active user of Google's Picasa Web Albums, or got friendly with your phone's camera right out of the box, you probably won't see this kind of array. But you will, over time, and it's good to keep it in mind for a truly personalized phone. Me, I have a picture I adore, of Mark Twain messing around in Nikola Tesla's lab, that I thought would make for a great wallpaper. I transferred it from my laptop to my phone's memory card by plugging my phone into my laptop with the USB cord, then mounting it as a storage device—all [covered elsewhere in this book](#). After copying it and unplugging the phone, the Gallery app automatically picked up the picture off the memory card, tucked in a "wallpaper" folder.

So, to set this picture as my wallpaper, I clicked the "wallpaper" folder in the Gallery view, then clicked the only picture I had in there

on the next screen. After doing that, your phone will ask you to crop and frame the portion of the photo you want as your wallpaper.

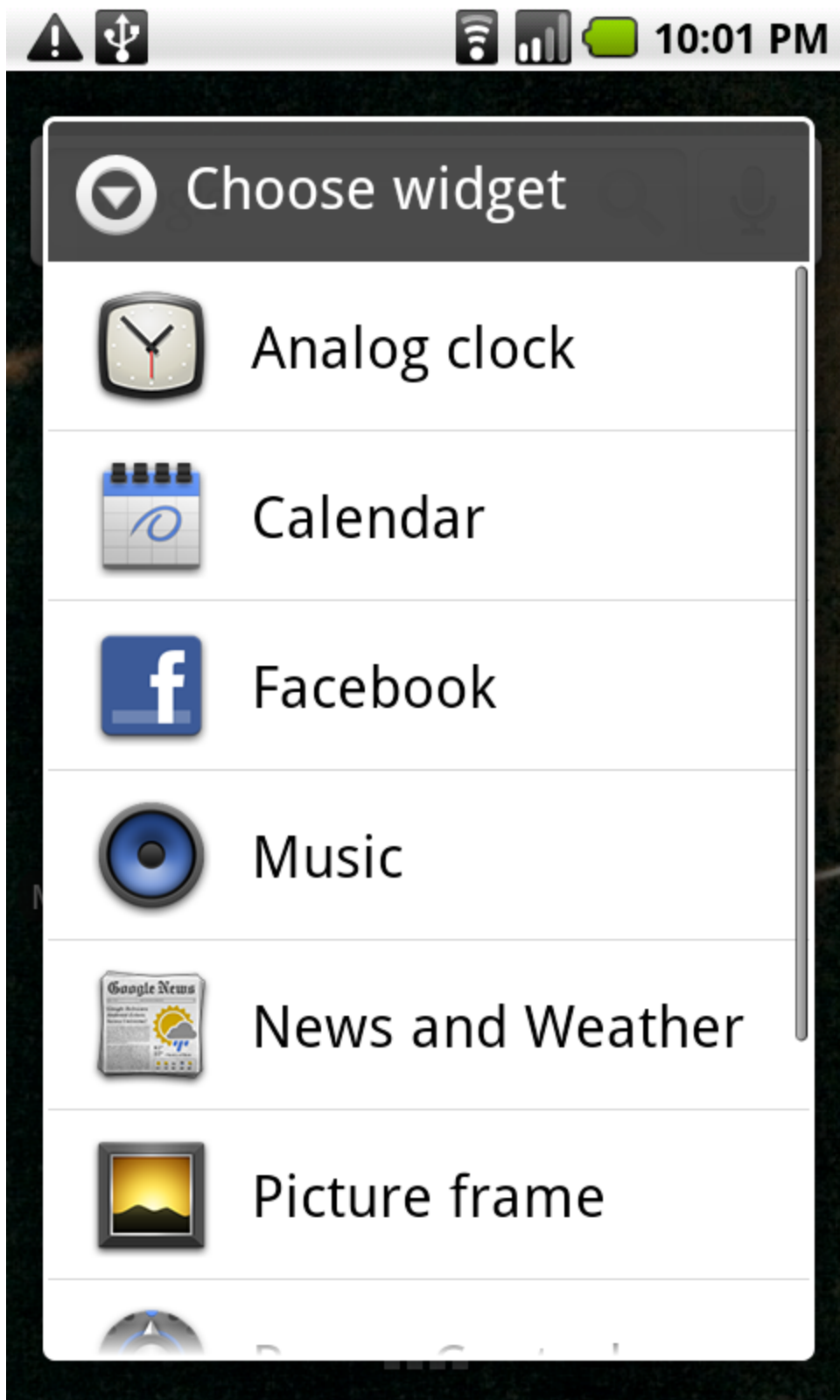


Cropping Your Wallpaper

Using your fingers, you can expand the orange box at its edges to encompass more or less of the image, though it always stays in a certain height-to-width ratio that will work well on your screen. You can also drag the orange box around by pushing it around from the center with your finger. When you've got a nice frame on what you want, hit "Save," or choose "Discard" if you can't get the perspective you want. Me, I'm pretty happy with my uber-dork wallpaper.

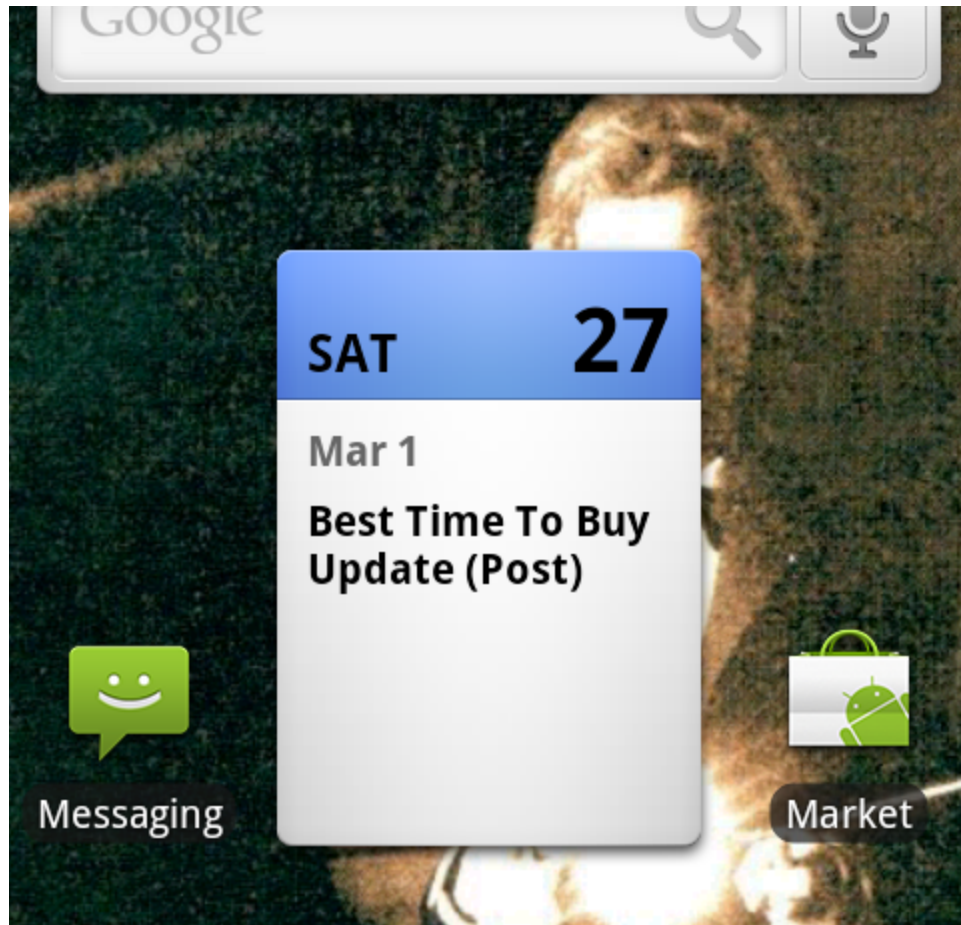
Adding widgets

Feeling a little more comfortable, a little more in control of your home screen? Great, now it's time to bust out the toys. On my own phone, I like to add a calendar widget to the center of my primary (center) home screen. It shows the next event that's upcoming on your Google Calendar agenda, and clicking on it provides quick access to all your events. Press and hold in the middle of that empty space, and select "Widgets" from the "Add to Home screen" dialog. Your carrier might have broken your widget offerings into different categories—"Widgets" and "Verizon Widgets," for example—but they're effectively the same.



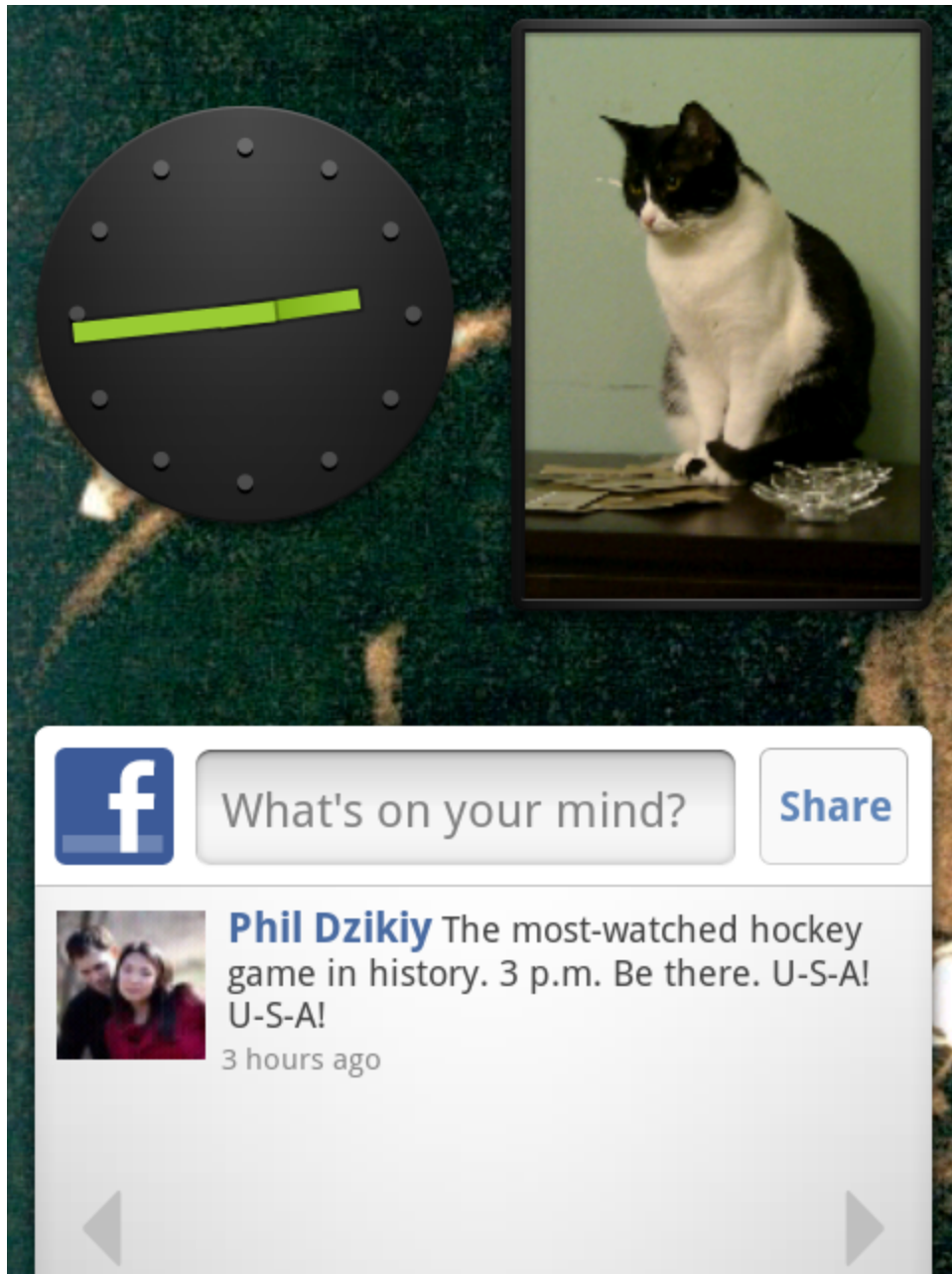
"Add Widgets" on the Home Screen Menu

Oh, my goodness—you could really get lost in these options. This list will only expand as you install new applications, but for now, you're looking at the default selection. I'm going to pick Calendar in this case, and it'll get placed just about where I pressed down in the first place.



Calendar Widget

All the other widgets



Widgets on Your Home Screen

I added the Calendar widget to my screen as an example, but what about all the other good stuff available by long-pressing on your screen? Here's the quick run-down on the widgets in Android 2.1 offered by default, and most should still be available to older Android versions as well.

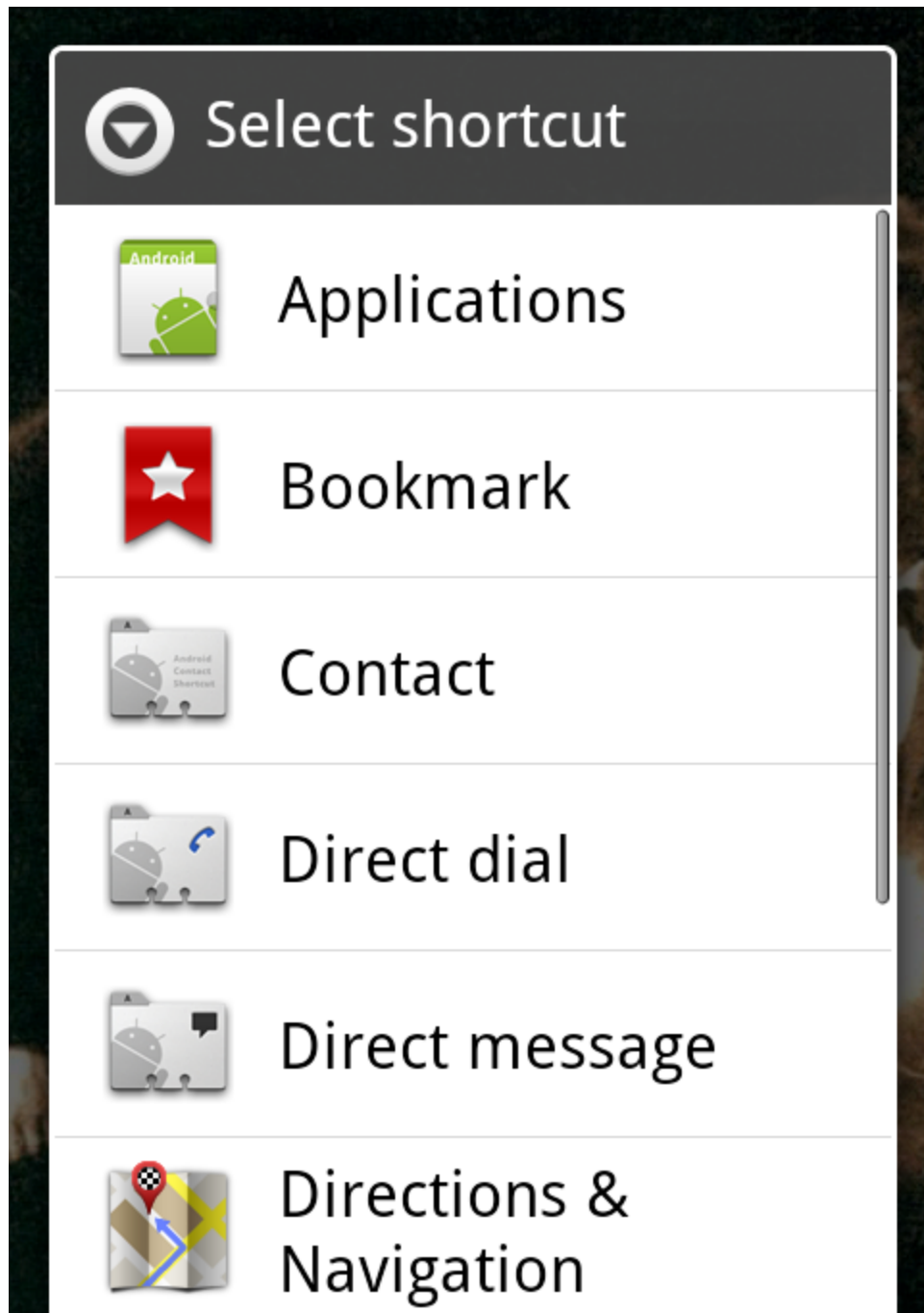
- **Analog clock:** Just what it sounds like: a wristwatch-style round clock with hour and minute hands. It doesn't do anything fancy, just tells the time. The upper-right edge of your phone always has the time, of course, but some folks can glance at analog clocks easier.
- **Calendar:** Shows the current day of the week and date of the month in a strip up top, then the date, description, location, and other details of the next event coming up on any of the calendars you've elected to show and sync with your phone. Clicking the widget brings you to your Calendar app, and hitting the Menu key from there lets you set which calendars are shown in the app and widget.
- **Facebook:** Scan through your [Facebook](#) friends' latest status updates by hitting the left and right arrows at the bottom of the (seemingly over-sized) widget, update your own status by tapping in the "What's on your mind?" box, typing, and hitting "Share." Tap the Facebook icon to head to the Facebook app, or tap an update to see that friend's profile.
- **Music:** Makes it easy to play, pause, and skip music files on your phone, and displays what's currently playing. Tapping the box with the track and artist names lets you select other songs or playlists.
- **News and Weather:** The app itself deserves more coverage (and we will get it), but the widget itself is a convenient little horizontal bar. You choose between just news, just weather, or both weather and news. Tap it to head to the News and Weather app, and hit Menu to choose how often it refreshes, and which topics it pulls headlines from.
- **Picture frame:** Just what it sounds like: choose a photo from your Gallery, frame and crop it, and it'll stick around on your home screen. That's all it does—serves as a little forget-me-not.
- **Power Control:** The most useful widget on your phone. A horizontal strip that has on/off toggles for Wi-Fi, Bluetooth connections, GPS location searching, and data syncing, and a three-stage toggle for screen brightness. It saves a lot of time

over digging through menus, and lets you quickly turn off features you don't need in order to save on battery life.

- **Search:** It's an easy location for searching the web, either by typing or—by hitting the microphone icon—with your voice, but it's also a means of quickly getting to contacts, web sites you've visited or bookmarked, apps you've downloaded, your music, and even YouTube videos. It's not the only way to get at this search function, but it is convenient.
- **YouTube:** A pretty simple, horizontal three-button widget: one to send you to the app, one to start recording a video that you intend to upload to your YouTube account, and one to search YouTube videos. In all honesty, these functions are all available right from the first page of the YouTube app itself, so you'd be better off just dragging a one-slot YouTube shortcut onto your screen than taking up all that space.

Adding Shortcuts

Shortcuts are just what they sound like: time-saving links to the things you most often do with your phone. That can be launching a certain application, calling or texting a particular contact, getting directions back home, or other tasks. To get at your shortcut possibilities, press and hold on an empty section of the screen, and select Shortcuts from the menu that pops up. Here's the top of what you'll see on a standard Android phone—your own unit may have some additional offerings.



Android Home Screen

All the shortcuts

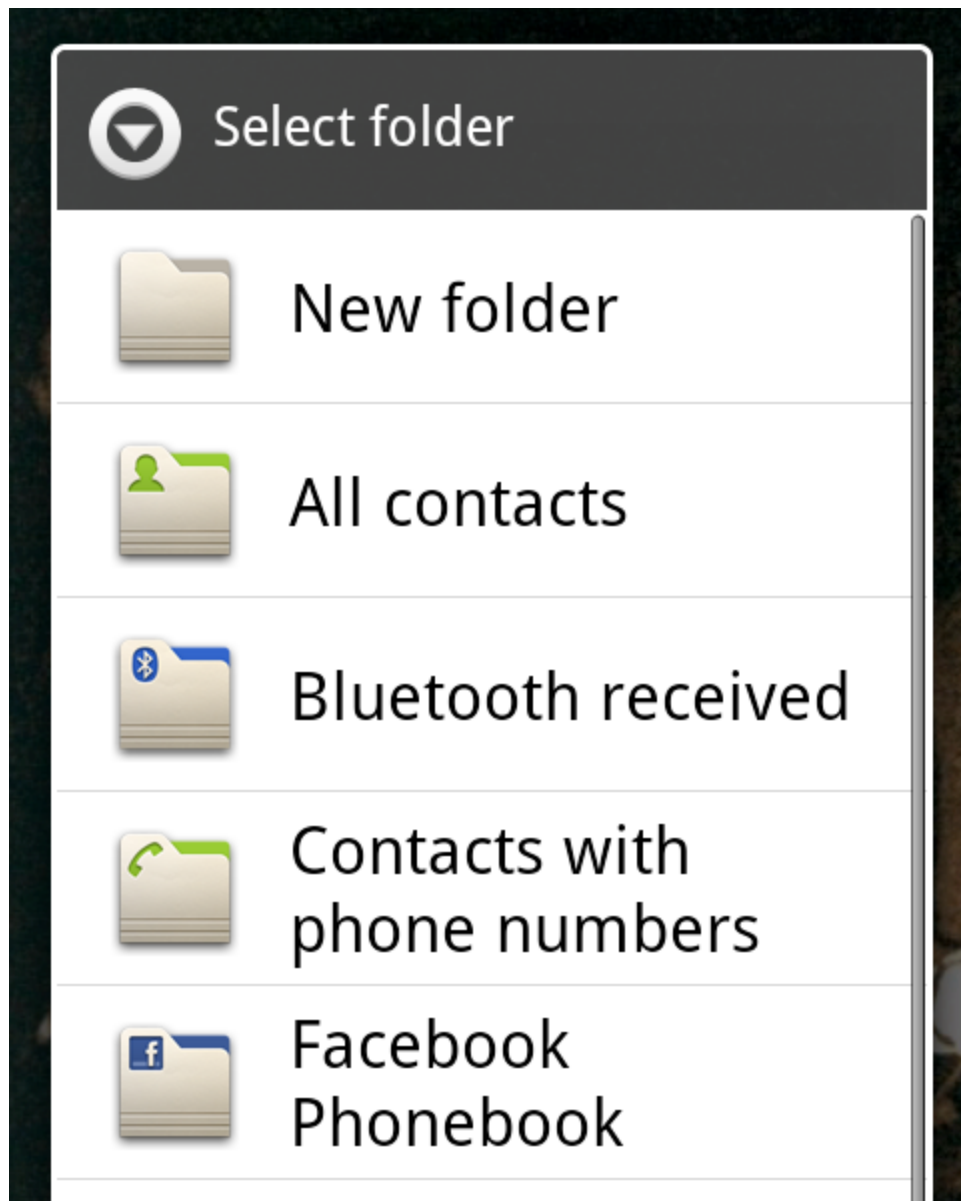
Let's quickly run through what you can do with these shortcuts. Some applications you install on your phone will add their own

shortcuts to your list, but here's the default selection:

- **Applications:** Adds one of your phone's apps to your home screen. It's the same thing as dragging that app from your tray onto your screen, only with more steps and scrolling required.
- **Bookmark:** Select a web site you've bookmarked in your phone's browser, and when you click it from the home screen, it will instantly launch your browser, pointed at that site.
- **Contact, Direct dial, & Direct message:** Choosing Contact, then picking a name out of your Google-synced contacts, will let you quickly bring up their contact page, with phone numbers, message icons, email addresses, and other information to click and act on. Direct dial and Direct message skip the middle steps and deliver you directly to phone dialing or SMS writing.
- **Directions & Navigation:** If there's a place you often want your phone to help you walk or drive to, select this shortcut, then enter the address. You can choose whether to have it bring up a map with listed directions, or turn on your phone's GPS-powered, turn-by-turn navigation system.
- **Gmail label:** Quickly pull up emails you've labeled a certain way in Gmail, or that you've set up a filter to label.
- **Music playlist:** It, well, brings up a music playlist you've created.
- **Settings:** Provides quick access to a fairly wide and deep selection of settings screens in your phone. Useful for keeping Bluetooth settings, Wi-Fi access points, and other occasional fine-tunings handy.
- **Toggle Google Voice:** If you're using a Google Voice phone number, this switches between always using your Google voice number and connection, asking to use it, using it only for international calls, and never using it. It's handy for using your phone in situations where you can't get cellular or Wi-Fi internet service.

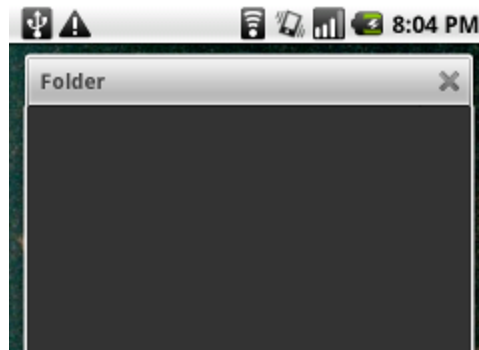
Folders

Folders on an Android home screen work the same way that folders on a computer desktop do. They're an organizational tool, a way of labeling and tucking away shortcuts. On a screen with a somewhat limited amount of premium up-front space, they're also really handy. Just like everything else, you press and hold on an empty space, then select Folders when "Add to home screen" pops up.



Creating Folders from the Home Screen Menu

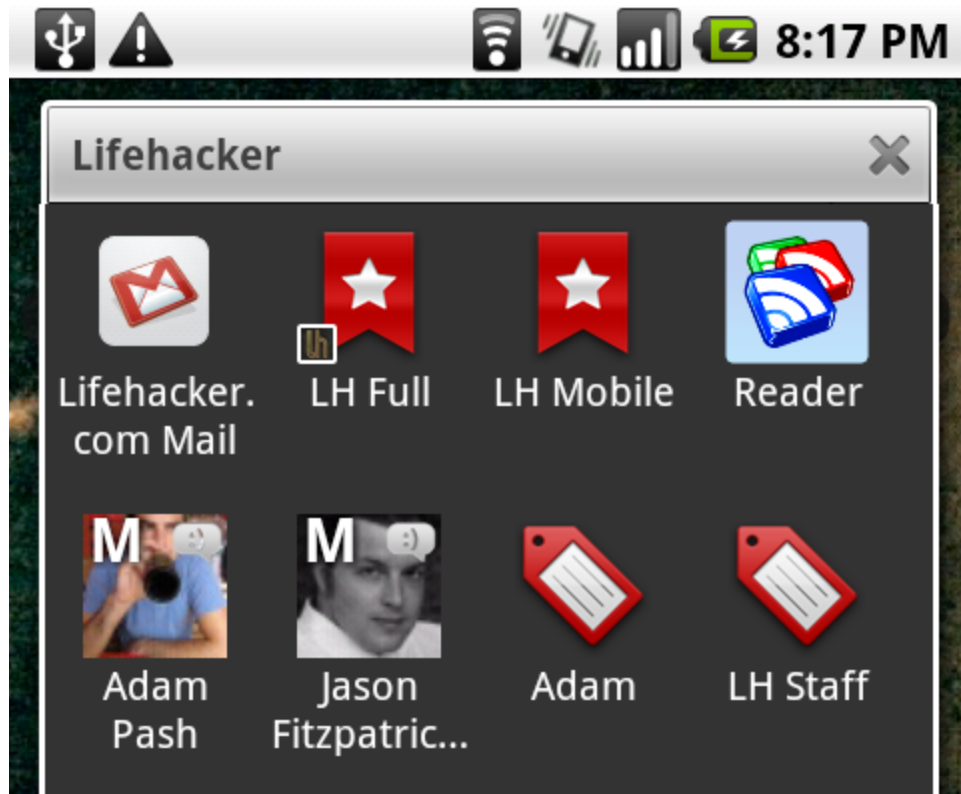
Everything other than "New folder" is fairly self-explanatory in purpose, but also covers aspects of the phone we'll cover elsewhere in this text. The basic folder, the one you drop your own apps, bookmarks, and other home screen icons into, is created by selecting "New folder." Select it, and a folder will appear in the empty spot where you held and pressed. It is just labeled "Folder" by default, but we can change that. Tap your new "Folder" icon.



Empty Folder

Not much to see here. To rename our folder something a little more recognizable than "Folder," tap and hold on the gray bar with the name "Folder." You'll get a text prompt, where you can type in anything you'd like to name the folder on your hardware keyboard, or with the on-screen keys. I'm naming mine "Lifehacker," and I'll store all the web bookmarks I use on my phone to help manage the site I blog for, Lifehacker.com.

Just like you drag apps from inside the app tray onto your home screen, you can drag apps, bookmarks, shortcuts, contacts, and most everything except widgets into a folder. The one trick to note is that you can't open the folder, then press and hold to create something inside it—you have to create your shortcuts outside the folder, then drag them on top of the folder, until the icon appears to "open," then let go. Here's what I ended up stashing inside my Lifehacker folder:



Sample Folder

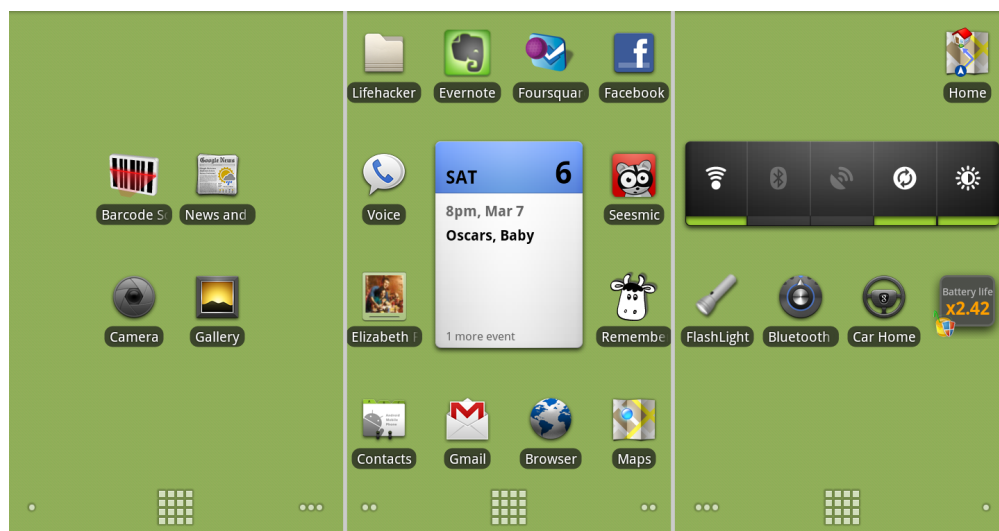
The top row is all bookmarks I've created in my browser, to sites like Lifehacker's email portal, the full-screen and mobile-formatted versions of the site, and the Google Reader tool I use to run through news feeds. The bottom row has, from the left, two quick text message (SMS) shortcuts so I can quickly text my boss and another editor, and then two links to labels in my Lifehacker mail account that I might want to keep up on—emails from my boss, and emails from other Lifehacker staffers.

In short, folders keep your home screen slightly less cluttered, and put only one additional click between you and the things you like to tap on frequently.

Get customizing

So now that you've seen how you can customize your phone's home screen, take a few minutes and play around with it.

Think about the kind of information you're looking for when you pull your phone out of your pocket, and set as much of it as you can on your central home screen. Think about what kind of themes, functions, or container systems the screens to the right and left can serve. Want an example? I'll share my phone, with screens from left to right. Note, however, that I'm only using three of the five screens offered in Android 2.1, I've changed the background to a simple green to prevent repeated images of Mark Twain, added gray bars to delineate my three screens, and cropped off the notification/status bar up top:



A Basic View of my Three Home Screens

I arrange my screens with a focus on the center two rows, because I'm mostly holding my Android phone with one hand, and when I let my phone rest, it sits just slightly left of center on the screen. With that in mind, I've put applications I'd use while I'm out and about, like the camera and photo apps, barcode scanner, and news/weather checker on the left-hand screen, because it's easy to swipe over to when I'm in a hurry, but even easier to turn the camera on by accident from a home screen icon.

Given that the center screen is the prime real estate, I gave the most prime space to the Calendar widget because it helps reinforce whatever event I have coming up next, whether it's a social event or a work deadline. Starting at the bottom left, I switched out the Phone shortcut and moved Contacts into its place, then put a direct contact link to my wife right above it. Just above that is a link to my Google Voice inbox, where I manage voicemail and SMS messages. The search bar that's placed at the top by default? I tapped, held, and dragged it into the trash, because on my phone, at least, hitting the magnifying glass button on the phone itself to type, or holding the button to speak a command, offers the same capabilities.

In the search bar's place, I've placed the Lifehacker folder full of bookmarks and editor contacts I detailed above, and then links to the web memory service Evernote, the location-based Foursquare network, and the Facebook client. Coming around the corner, there's Seesmic for Twitter checking and posting, and Remember the Milk for to-do lists. The Maps and Browser icons remain where they were by default, and I put Gmail in a fairly comfortable place on the left.

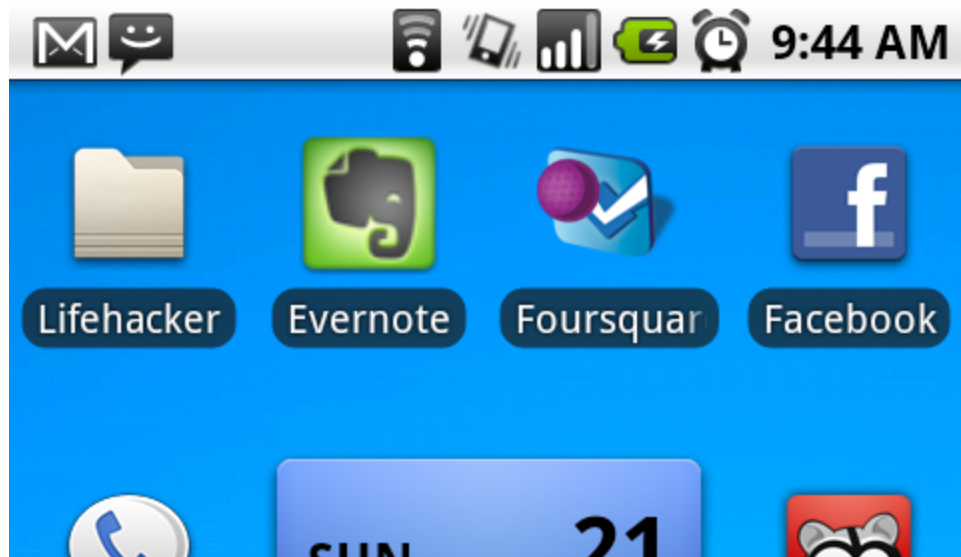
Finally, on the right-hand screen, I've moved the Power bar widget down one row, then loaded a few helpful settings and utilities below it. FlashLight is a goofy-but-useful app that turns the entire screen white, so you can find your way around a dark kitchen. Next to it, I tapped and held, selected Shortcuts, then Settings, then selected Bluetooth settings. That way, I could have quick access to the devices and computers my phone was hooked up with by Bluetooth, right under the on/off Bluetooth switch on the Power bar. I put a link to the Car Home, with its big buttons and car-oriented shortcuts, under the GPS switch, and that widget on the far right is an on/off switch and battery tracker for JuiceDefender, a very geeky app that tries to save battery life by automating internet connections and Wi-Fi use.

Have fun

It must be noted that if you add 15 social widgets that constantly update, your phone might start to see some slowdown, especially when returning home after using an app. That aside, your phone's home screens are yours to arrange, optimize, mess with, and make your own. It's no big effort to keep a photo frame of your kids or pets on the far-right screen for quick bragging rights, or keep a widget with the latest news on your favorite baseball team on hand.

You can similarly customize your phone Notification bar on top to keep you informed, and that's precisely what we're covering next.

Notifications and the Notification Bar



Notifications in the Top Left

Use your phone for just about any length of time, and you'll notice that little icons pop up and sit on the top-most gray bar on your phone. This is known as the **Notification Bar**, though it's sometimes referred to as the "Status Bar" or "System Status Bar" in Android developer documents. For the purposes of this book, we'll call it the Notification Bar, because it's where you get notified of things.

What kind of things? The bar is divided into two basic sections. The left-hand side is where your applications and message services can drop you a note that there's something new to look at. The right-hand section, which is given more space, is where Android gives you the basic status information you'd expect from any cellphone. Let's start there.

Note: The look, and perhaps arrangement, of the notifications and status bar icons described in this chapter may look different on your

phone, especially if it's made by HTC. The functionality of the Notification Bar, and the meaning of the icons, stays the same across all phones.

System Status Icons

Starting at the right and heading left, you'll see what time it is, then an alarm-style clock icon if you've got an upcoming alarm set. To the left, you'll always see a battery icon, which fills up from right to left and changes from red to yellow to green as your phone gets juiced, and shows a power symbol if your phone is being charged. Next up on the left is the familiar cellular signal strength indicator. To the left you'll find another icon that appears if you've got your phone set to vibrate, or make no noise at all, for incoming calls. Finally, to the right of that vibrate icon, or on the far left of the right-hand icons (confusingly enough), you'll see possibly the most important indicator for an Android addict: the data connection icon.

When you've set your phone to connect to a wireless (Wi-Fi) signal, you'll see a recognizable circle and waves icon, with more waves lit up to indicate a stronger signal. We'll cover how to connect your phone to Wi-Fi networks in your home, your office, coffee shops, and other spots in just a bit. For now, we should point out that seeing the Wi-Fi icon simply indicates that your phone has been permitted to connect to a Wi-Fi network, and that usually means you've got web access—but not always, depending on the network setup.

Cellular Data Indicator



Cellular Data Indicator

If you've turned Wi-Fi off, or there's no valid network in range, you'll see a cellular data connection indicator, assuming you've purchased a data plan from your carrier. If you're a T-Mobile or AT&T wireless customer, or in Europe or on another [GSM](#) network, and you're in range of a data connection, you'll see different icons depending on your signal speed and strength. "G" indicates you've got only a very basic [GPRS](#) connection, which is a kind of last resort in this day and age. "E" shows that you're connected to an [EDGE](#) network—decent enough at browsing text-heavy web pages and managing email, but not so hot at multimedia. "3G" refers, as you might guess, to the heavily advertised [3G](#), a kind of catch-all term for a connection package that delivers a decent web experience—slightly better than you'd get at home with a DSL connection, speed-wise, but with a bit more latency between requesting something and getting it back. Verizon, Sprint, and other [CDMA](#) networks provide a more simple scale: 1x for basic, slower data service, and "3G" to indicate a full-strength connection. Speeds will vary across locations, and technologies like "4G" and WiMax are developing, so expect to see different icons in newer areas.

Your cellular connection icon has two arrows, up and down, that light up when your phone is passing information "up" to the network and making requests for web sites and services, and "down" when it's pulling data. These arrows can tell you a good bit about what's happening with your phone. When it's busy grabbing data and checking what's next, both arrows will be lit up. If you notice that only the "up" arrow is steadily lit up, and your web-connected apps don't seem to be responding, you might need to close that app or restart your phone to get it unstuck, so to speak. If you're wondering why your phone is so warm, see if the arrows are staying lit continuously, which indicates a big download or sync you might want to stop if you're trying to conserve batteries.

Message and App Notifications

The left-hand side of your Notification Bar is where you see updates, messages, sync announcements, reminders—anything any app on your phone wants to tell you about, and that you probably want to be kept aware of.



Notification Pop-Ups

With only the apps that come pre-installed on your phone, you'll start getting these little pings right away. The two pictured at left are the most common: A Gmail-like icon to indicate you've got, yes, a new Gmail message. The smiley-faced, speech-bubble-looking guy to the right of the Gmail is an indicator of a new text message. If you happen to be holding your phone and the screen is on when they arrive, you'll notice your phone vibrate, beep, or otherwise react, an LED or trackball on your phone might light up, and the Notification Bar itself will roll up, stock-ticker-style, to show either a basic message ("New Email") or a quick read on the message ("**Jim Smith** - Hey Steve just wondering where you are..."). If not, these updates will plant themselves in the Notification Bar, and you can act on them whenever you want.



When Notifications Pile Up

Depending on your screen, you'll have a certain maximum number of icons that can stack up on the left-hand side of the Notification Bar. When you reach that limit and more notifications are coming in, the Notification Bar will show a generic left-pointing arrow and the number of notifications beyond what sits to the right of it. If you find this happening too often for your tastes, you can set up certain applications to stop putting up notification badges in the bar, covered just a bit further down.

March 21, 2010     9:52 AM

T - Mobile

Clear

Ongoing

USB debugging connected

Select to disable USB debugging.

USB connected

Select to copy files to/from your computer.

Notifications

New Reply

@kevinpurdy Seriously, yo -- what's crack 9:50 AM

+14066860044

Elizabeth Fox-Solomon - Hi

9:44 AM

Test test 1 2

Kevin Purdy

9:39 AM

Notifications Pull Down Menu

How do you act on notifications? By "pulling down" the bar from the top of your screen. Place your thumb or finger at the top of your screen, on the gray bar or slightly above it on the black buffer around your screen. Slide your finger at least halfway down the screen, and you'll see a gray "window shade" pull down with it. You can let go when you're halfway down, and the screen will fall all the way down. If you pull down fast and let go, you can also flick the screen down without having to follow it with your finger. Trust me—over time, your subconscious will start connecting the "New thing on my phone" sound or buzz with the "Flick down the screen" motion, and it will feel pretty natural.

What's on the Notification Bar? That depends on what apps and processes you have running on your phone, but they work mostly the same. In the example above, I have my phone connected to my laptop via a USB cable, and I've enabled USB debugging in the settings in order to take screenshots of my phone. Those are "Ongoing" things that I shouldn't be able to dismiss, but that I can access by clicking on either of those items. When you have music running in the background, or if you run software that tracks your exercise with GPS, for example, those will show up in the same "Ongoing" area. In many situations, this area won't show up at all.

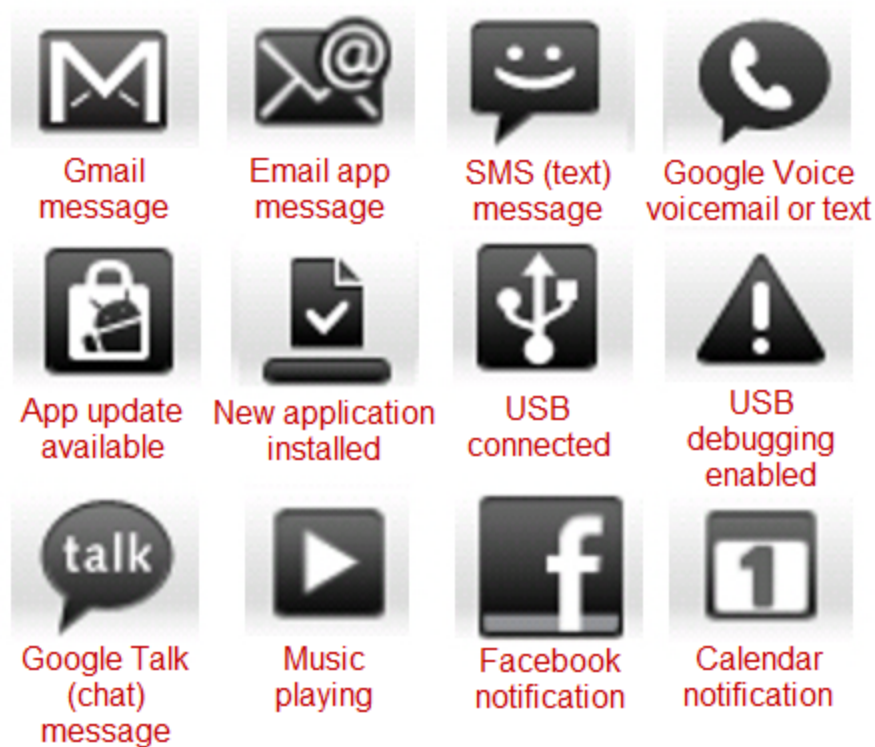
"Notifications" is what you'll usually see when you pull down the window shade. In the example at left, I've got three items that have arrived since I last looked. The little critter icon next to the "New Reply" notice indicates that [Seesmic](#), the Twitter client on my phone, has a new reply for me, and shows a small part of the message. Under that, there's a text message from my wife, and an email to myself at the bottom, with the subject line highlighted. If I tapped any of these rows with my thumb, the application they came from—Seesmic, Messaging, or Gmail—would launch and show that message.

If you're not in the mood to see them, or plan to get to them later, hit the "Clear" button in the upper-right corner. Those messages won't

be deleted or marked as read, but will be dismissed from the "Notifications" section.

What Notifications Mean

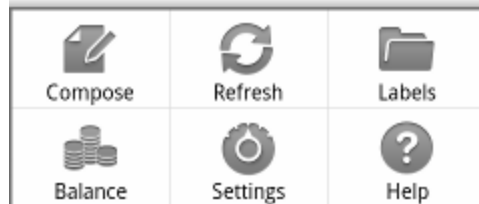
To a newcomer, the icons that appear in the Notification Bar aren't exactly apparent, even after rolling down the window shade to see what's happening. As you install new applications from the Market, they'll add their own notification icons, but every Android phone has a standard set it uses. Here's a look at those default notifications (which, as noted above, are pulled from an Android 2.2 phone running the stock interface; yours may vary).



Notifications

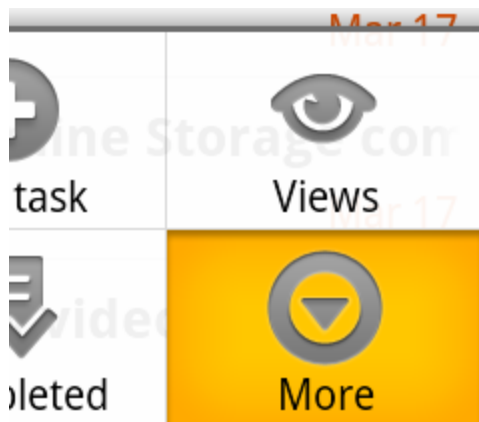
Control When Notifications Show Up (and Buzz, and Ring, and Light Up)

There is, at the moment, no one central spot on your phone to control which notifications show up on your phone—and that's a pity. Instead, you'll need to open up each application and tweak how and when it notifies you about new messages or happenings.



Moving an App Icon

I'll use the Voice (a.k.a. Google Voice) application as an example. Hit the app button at the bottom of your home screen to launch the application list, and choose Voice. Hit the Menu button on your phone when the app launches, and you'll see a Settings icon, which looks the same on just about every Android app.



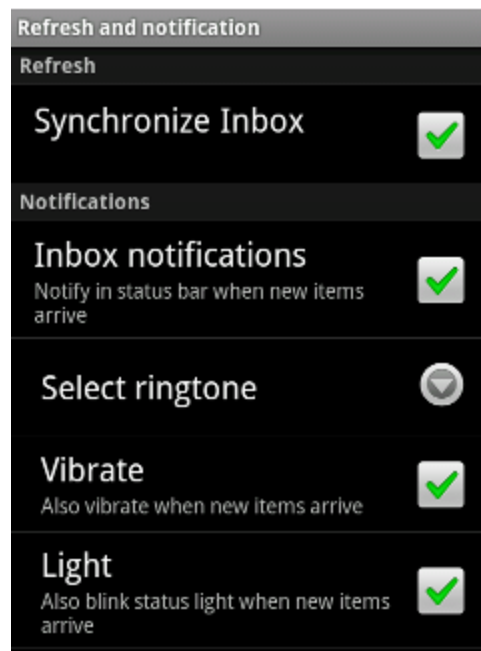
If you don't see "Settings," try "More"

Sometimes, though, an app's Settings—sometimes dubbed Preferences—are tucked away under the More button. Hit the button and a sub-menu of options will pop up, with Settings often among them.

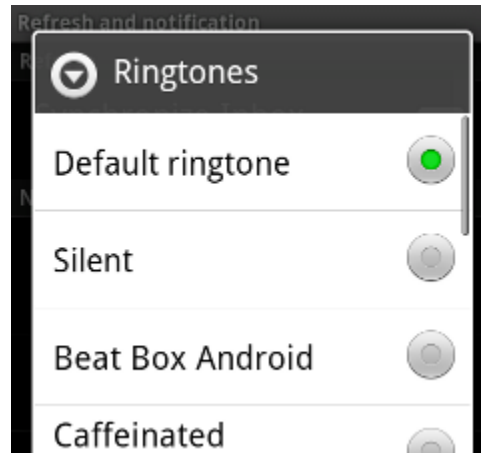


Google Voice Menu, Refresh and Notification

In most Android app's settings, you'll find a category for "Notification," "Alerts," or something akin. In the Voice app, it's "Refresh and notification," as if to cover all bases. Click it!



From this screen, you can usually change when and how an app notifies you of whatever it monitors. In the Voice example, I can un-check "Inbox notifications" entirely to remove Voice's pinging from the Notification Bar. In less drastic fashion, I can un-check Vibrate and Light to turn off phone vibrations and blinking of the LED light on my phone. "Select ringtone" seems to imply that I can only select a different sound for Voice notifications, but click it and take a look:



Ringtone Menu

You can keep Voice using the same ringtone your phone normally uses, or select "Silent" to have Voice not actually make a sound. You can also choose a different ringtone or sound, so that your brain eventually learns what each sound means when it issues forth from your pocket or purse.

Now you've got a pretty good handle on how your phone keeps you aware of everything coming in, and how to calmly filter or ignore those notifications if you don't want to be chained to your phone. Let's dig in a bit deeper now into becoming a producer of messages, not just a diligent receiver.

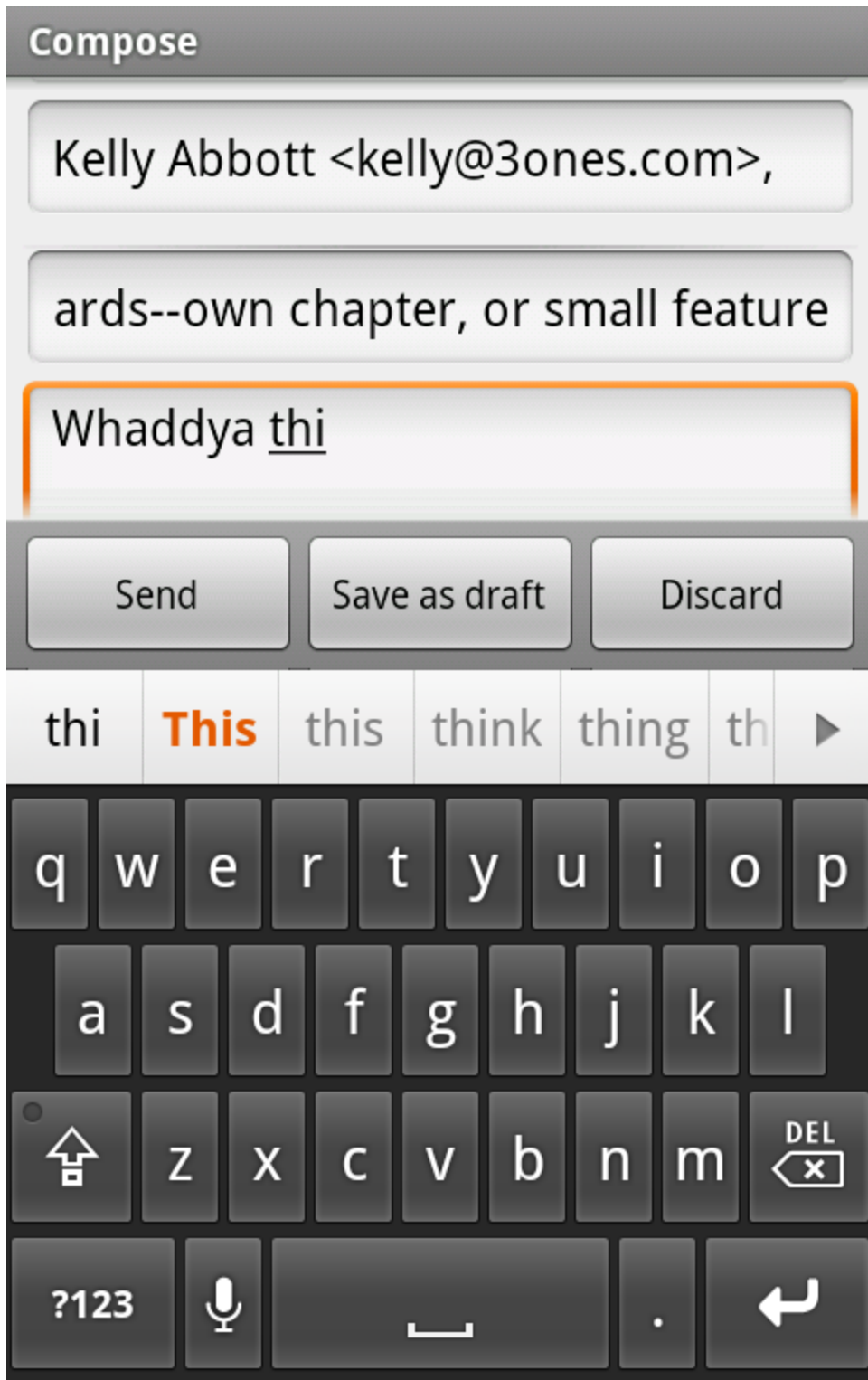
Keyboard and Voice Input

You probably got a basic feel for Android's on-screen, virtual keyboard the first moment you powered up your phone—you had to, really, to set up your Google syncing. Your phone might have a physical keyboard that's better for longer messages and emails, but for your one-handed searching and "be there in 5" replies, you'll want to be up on your virtual keys.

Note: If your Android phone comes with the HTC Sense theme installed (in other words, your keyboard has white buttons and doesn't look like the keyboards in these screenshots), you'll still get something out of this chapter, especially the bits about voice input. But skip down to Alternate Keyboards to see how you might change up your game, including the use of neat gesture-based keyboards that can speed up your text entry considerably.

The Standard Android Keyboard

The keyboard generally comes up whenever it's called for. Whenever you open up an app that needs input, or click somewhere to input text, the keyboard jumps up, and your screen shifts to keep the keys right under the text box.



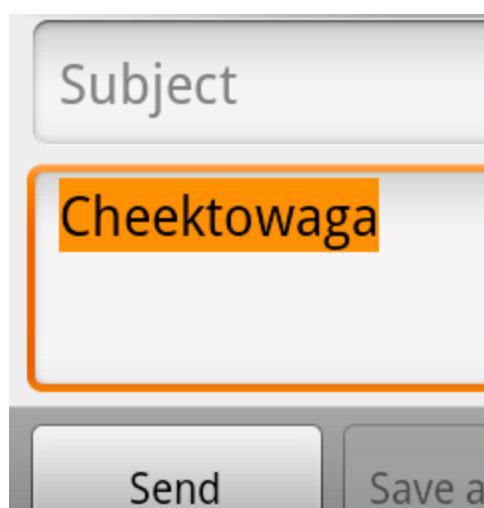
Typing in the Gmail App

The orange border indicates which box has text being edited.
Underneath the buttons needed for this email, you'll see guesses by

the system as to which word you're typing out, changing as you type each letter, with the best guess highlighted. Pick any of the words with your finger, and they drop into your text. If that highlighted word is, in fact, the word you're trying to type, you don't need to tap it with your finger—just hit the space bar, and that word gets automatically completed.

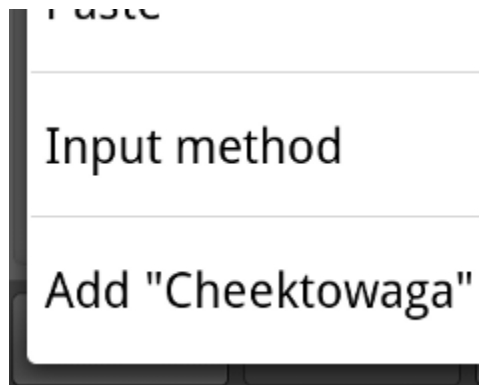
Adding to Your User Dictionary

Those word suggestions you see as you type come from a standard dictionary included on every phone. If you commonly use particular words that aren't included in the dictionary, you can save yourself time by adding them to the "User dictionary." You can do it from the main Settings, but it's also not that tough to add as you type.



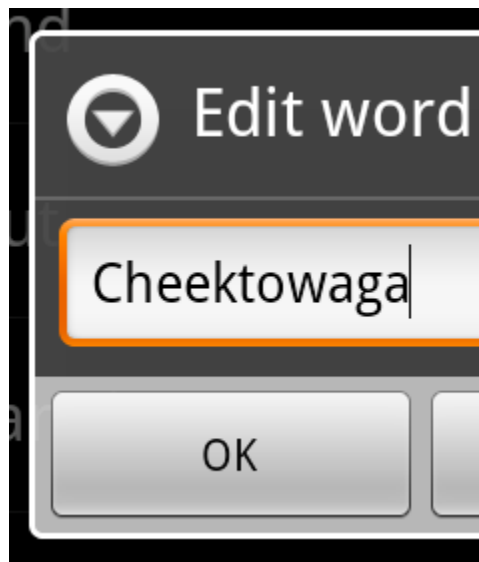
Adding to the Dictionary

When you hit a word that you realize your phone will never consider legitimate, select it by double-tapping the word with your finger (or, the much longer way, choosing "Select text" from the "More" menu, if available, and using your trackball to grab it).



Hit "Add 'Your Word'"

Next, press and hold on the word (or hold down the trackball), and scroll down in the pop-out menu to choose "Add X to dictionary."



Edit and Hit "OK"

You'll end up inside your User dictionary, with the word you want to add already loaded in. You can modify it here before submitting it, or just hit "OK" to submit the word.

Next time you start typing in the first few letters of your odd little word, it will show up in the suggested words list above the keyboard, and you can save yourself the typing time. Highly recommended for residents of Mooselookmeguntic, ME, Kleinfeltersville, PA, or Waugullewutlekaup, CA.

Android Keyboard Layout

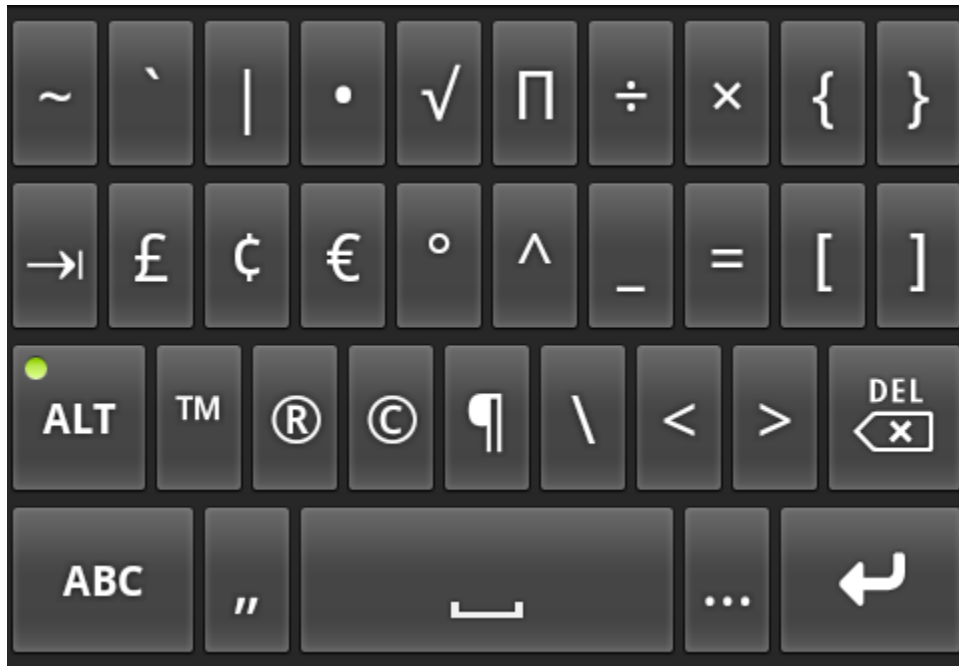
The keyboard itself features a slightly modified "QWERTY" layout familiar to any computer user. The "up" arrow near the lower-left is the shift key: hit it once to pick out a single capital letter, or twice to type in all-caps. The backspace key is on the far right, the enter key just below it. Second from the left on the bottom row, there's a microphone icon, which we'll explain in just a bit.

At the very bottom and left is the keyboard "switch," for lack of a better term—it opens up half of the other characters you're used to seeing on a full keyboard:



The Keyboard after Hitting the "?123" Button

Hit "ALT" on the left and you'll get another set of even more specialized keys:



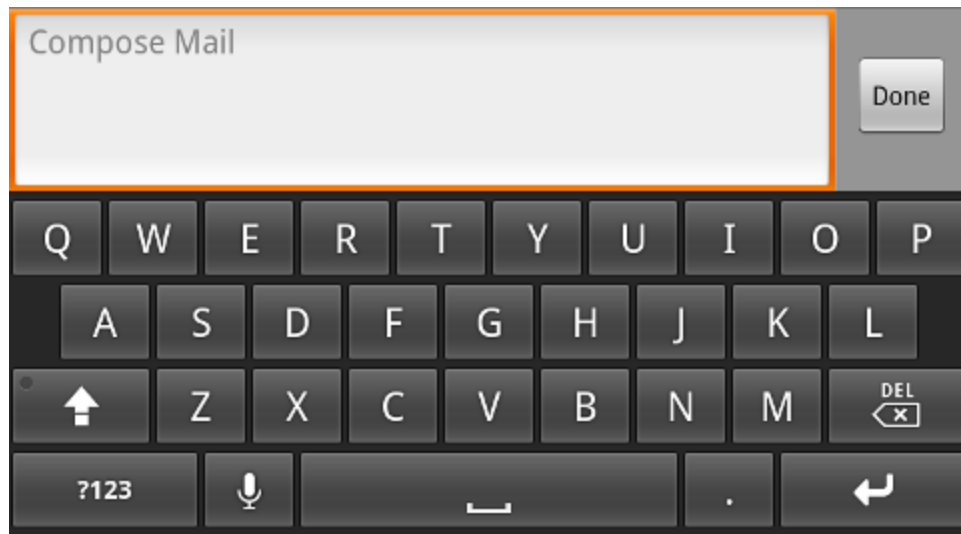
The "ALT" Keyboard

But let's say you're sick of hitting the "?123" and "ALT" buttons to get at your alternative keys. Starting with Android 2.2, you can press and "pull" the top edge of the keyboard up with a finger or thumb, then navigate to one of 20 common punctuation marks or numbers shown there.



Keyboard Extended by "Pulling" up with a Finger on Android 2.2

With one or two thumbs in the "portrait" orientation, you can type out a few words, or start a search and click the best result as it comes up. If you need to do a bit more typing, simply turn your phone sideways (into what's commonly called "landscape" orientation, as opposed to the more vertical "portrait") and the keyboard will rotate automatically. You'll lose the view of the app you were in, but you'll gain a keyboard that's conducive to faster two-thumb typing.



Keyboard Turned for Landscape (Sideways) Typing

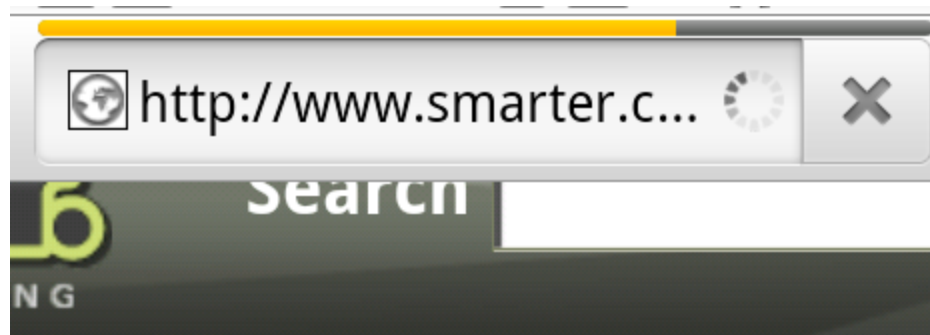
It's worth noting that, while the keyboard generally does a good job of knowing when to pop up and when to hide away, there might be rare occasions when you need to pull up the keyboard manually, or hide it when it's obscuring text or buttons you need access to. To manually pull up the keyboard, press and hold your physical Menu button on any screen, and the keyboard should pop up. To hide an errant keyboard, press near the top of the keyboard and "swipe" it downwards, as if you were sliding down a projector screen.

Selecting, Copying, and Pasting Text

You can copy text from your emails, from the browser, or from other text-intensive apps that offer the option. The option "Select text" is usually tucked away in a "More" menu. The process for selecting and copying text on most non-HTC Android phones is the same, and once you've got that text copied, you can paste it into any app on your phone.

Let's say that I need more coffee to keep cranking out these book chapters (that's actually far from hypothetical). I'm going to ask my publisher to send it to me, but I need to specify which brand of coffee

for my Keurig brewer. So I open my browser and head right to the purchase page:



d & Drink > Coffee >
ve - Extra Bold

Keurig Green Mountain Sumatran Reserve - Extra Bold

Exotically lush, sweet, and heavy bodied / Fair Trade
Certified Organic by Quality Assurance International
18 Pack K-Cups

The Text I Want To Select

With the page pulled up, I hit the Menu button on my phone, select the More sub-menu, then pick "Select text" from the offerings that come up.

n Mountain Sumatran
Extra Bold

weet, and heavy bodied / F
: by Quality Assurance Inte

The Pinpointing Cursor for Text Selection

From that point, you *could* use your finger to pick out the text you need, but unless you're looking at very big, isolated text on a fairly large screen, you'll probably get frustrated with your tiny little over-steps and under-shoots. However, if you've got a trackball or similar device, you can move the (oddly Windows-like) cursor to the point at which you want to start or end your text selection.

d & Drink > Coffee >
ve - Extra Bold

**Keurig Green Mountain Sumatran
Reserve - Extra Bold**

Exotically lush, sweet, and heavy bodied / Fair Trade
Certified Organic by Quality Assurance International
18 Pack K-Cups

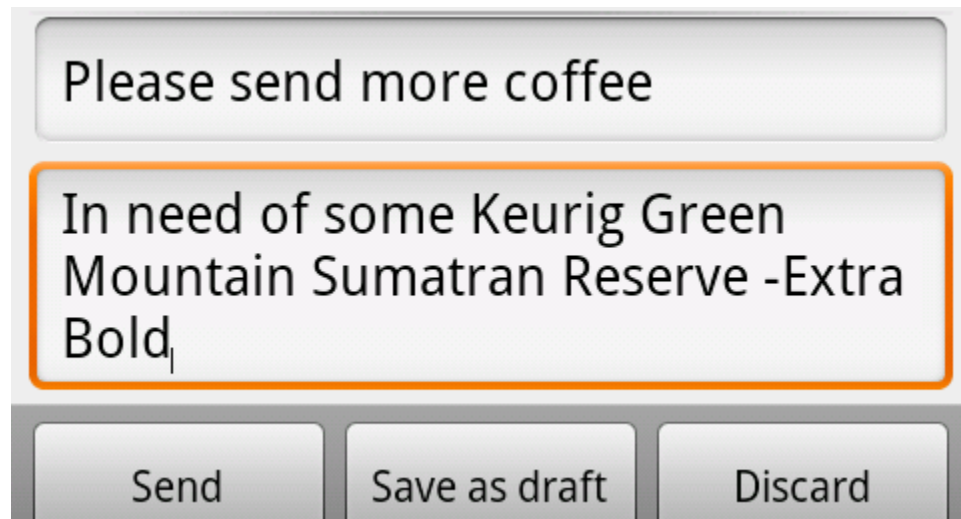
Selected Text is Highlighted

Click the trackball/tracker device, then start scrolling in the direction of the text you need to capture. When you've got just what you want selected, click your tracking device again, and you'll see a notice pop up: "Text copied to clipboard."

The screenshot shows a mobile application interface. At the top, there is a grey button with the text "Please send more coffee". Below this is a text input field containing the text "In need of some" followed by a vertical cursor. The input field is outlined with a thick orange border. At the bottom of the screen, there are three buttons: "Send", "Save as draft", and "Discard".

Text Will Paste Where Your Cursor Is

Back in my Gmail app, I've written up what I need before my paste, then I'll press and hold on the text field, and select "Paste" to put my text right where the cursor is positioned.



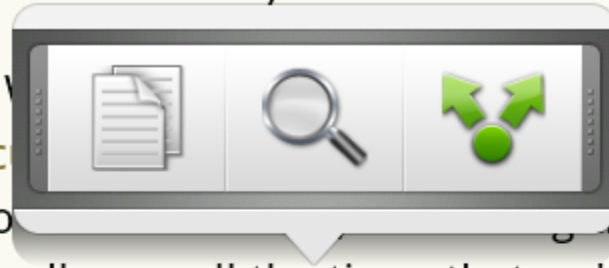
Successfully Pasted

Perfect. I can smell those deep notes of robust mountain flavor wafting through my office already.

If I were using an HTC device, the text selection would be a little bit different. Actually, it's not all that different, if you've ever used a modern iPhone:

you home from anywhere.

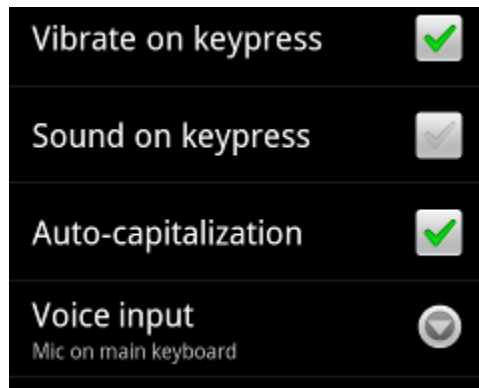
Note: We have a **shortcut** on our phone that I personally use all the time, that we're posting about it again. Also worth noting: Many commenters' initial reaction is "This is a bad idea! A thief will **find your house.**" If **you don't have a lock on your** phone, a thief can easily grab your home address from your contact card (or other potential sources), too.



Selecting Text on an HTC

After picking "Select Text" from your menu, you press and drag your finger to the approximate point you want to start or stop your selection. Two markers will pop up, which you can then hold down and drag to better fit the outline of your text. Once you're done, you can press the "pages" icon to copy that text, the spy glass to search for it on the web, or the Share button to send the text through one of your other apps.

Keyboard Settings



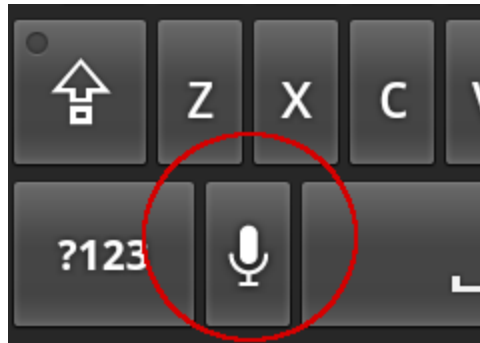
Keyboard Settings Screen

You can't reach the settings for the standard Android keyboard through any button on the keyboard itself. Instead, head back to your home screen, hit the Menu button, select Settings, then choose the "Language & Keyboard" section. Select the "Android keyboard" offering, and you'll see these options:

- **Vibrate on keypress:** Check it to have your phone make a little micro-vibration every time you press a key. It can give you a little more reassurance that you're hitting the right keys, and may speed you up, but can also be an annoyance in very quiet spaces—hence, it's off by default.
- **Sound on keypress:** Your phone will actually audibly click every time you hit a letter. There's very little reason to turn this on.
- **Auto-capitalization:** Un-check this if you don't like how your phone automatically capitalizes the first word after a punctuation mark.
- **Voice input:** An odd label, because this only changes where the microphone icon to trigger voice input appears: "On main keyboard," "On symbols keyboard," or nowhere ("Off").
- **Input languages:** As noted on the setting itself, you can change your keyboard language—affecting the words recognized and punctuation available, mainly—by sliding your finger across the spacebar. But you can also pick one or multiple languages here.
- **Word Suggestion Settings:**

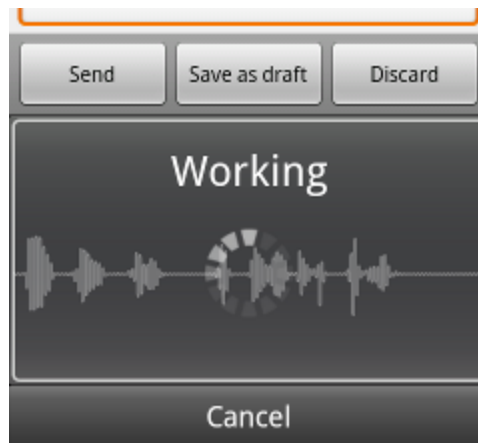
- **Quick fixes:** Decides whether Android should automatically fix the typos and misspellings that it notices your fellow humans make all the time.
- **Show suggestions:** Un-check this box to get rid of the words over the keyboard you can press for quick completion.
- **Auto-complete:** When checked, Android will automatically pick the most likely word you're typing if you hit the spacebar or a punctuation key. It's greyed out if "Show suggestions" is un-checked.

The Magic of Voice Recognition



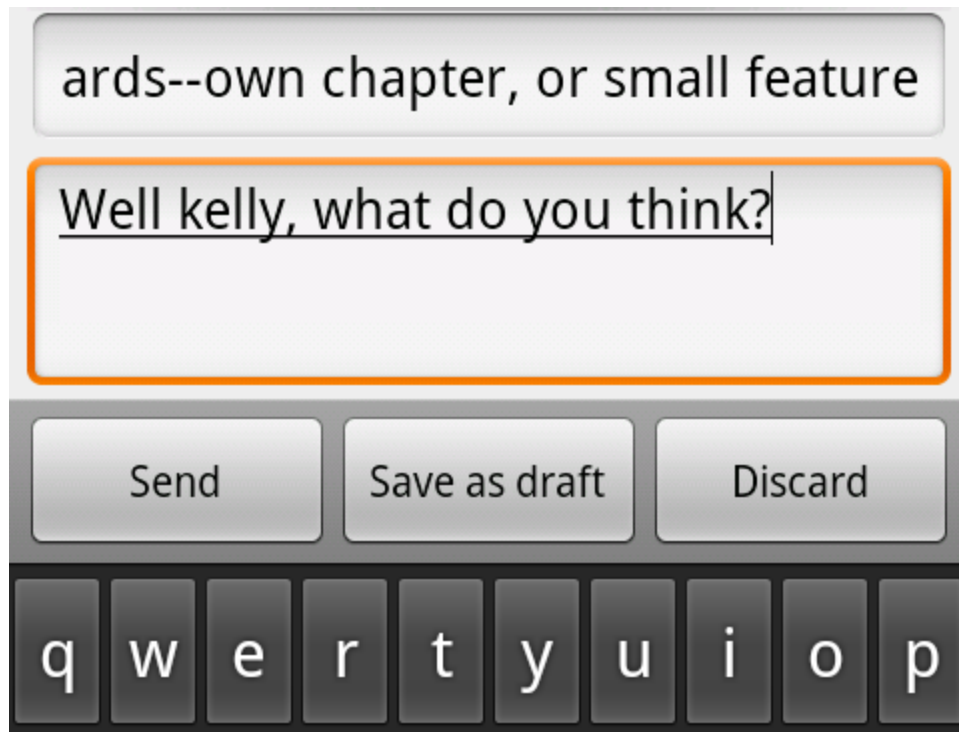
Click the Microphone to Voice Search

On both the "portrait" and "landscape" setups, you'll see a microphone-style icon. What happens when you press it? Your phone starts listening, so say something into the phone receiver. You don't have to hold the phone up to your face as if you're on a call; simply talk as if on speakerphone.



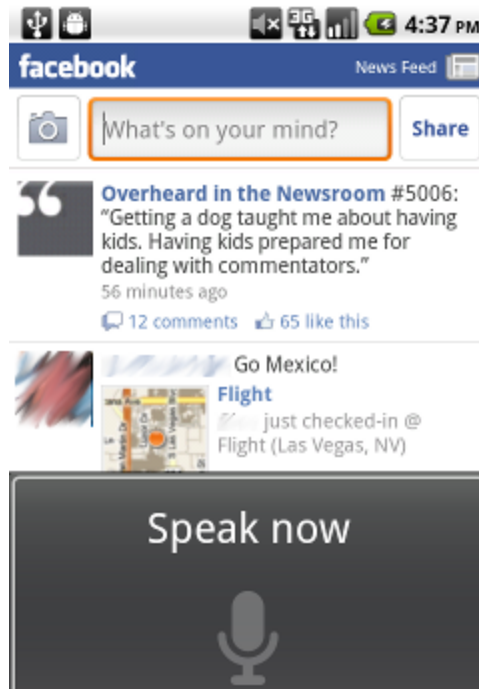
Wait for Your Words to Hit Google's Servers

As soon as your phone senses that you've stopped talking for a full second, it gathers up what it just recorded, submits it to Google's servers, and uses the search company's database of speech-to-text data to take a stab at what you were saying.

A screenshot of a mobile application interface. At the top, there is a grey rounded rectangle containing the text "ards--own chapter, or small feature". Below this is a larger white text box with an orange border. Inside this box, the text "Well kelly, what do you think?" is displayed and underlined. Below the text box is a row of three grey buttons labeled "Send", "Save as draft", and "Discard". At the bottom is a row of ten dark grey buttons with white letters: "q", "w", "e", "r", "t", "y", "u", "i", "o", "p".

Google's Transcription of Your Voice, Underlined

What you just spoke, or Google's best stab at what you just spoke, appears underlined in the text box starting from the point you had your cursor. It's worth learning—though you'll probably figure it out on your own, unfortunately—that if you hit the backspace/delete key right after your voice-to-text words show up, you'll be telling your phone, "No, that wasn't it at all," and everything gets wiped out. It's best to move your cursor around just a bit with the trackball before fixing any errors, and also to hope Google fixes that shortcoming in a future update.



Facebook Voice Search

One of the most important things to note about this speech-to-text feature is that it works **almost anywhere you type in text**. If you're walking around and don't want to be the person who trips while texting, or find yourself deeply lounging on the couch and not wanting to type, go ahead and say what you'd like to write: in an email, a text message, a Facebook update, a web search, anywhere. Once you get used to speaking for translation (see the next section) and using your voice everywhere, you'll start to feel like the future is on its way—even if the future sometimes throws a "come on" in where you meant to have a comma.

Voice Actions in Android 2.2



If your phone received its upgrade to Android 2.2, or came pre-loaded with it, you'll want to check out Voice Actions, an upgrade for Google's speech-to-text capabilities that goes far beyond web searching and text filling. Press and hold down your phone's Search button, or press the microphone button on the search bar widget, and you can actually start an SMS or email with your voice ("Send text to John Smith"), launch your music ("Play Motorhead") on both

your local music player or streaming services like Pandora, get Navigation directions, and more. Best of all, you can speak out your text or email messages piece by piece, then edit any misunderstandings with the keyboard or your voice.

For more tips on what you can do with Voice Actions, check out [Google's showcase page](#). If your phone received its update to 2.2 over the air, you'll have to search the Market for "Voice Search" to download the updated Voice Actions.

Tips for Better Speech-to-Text

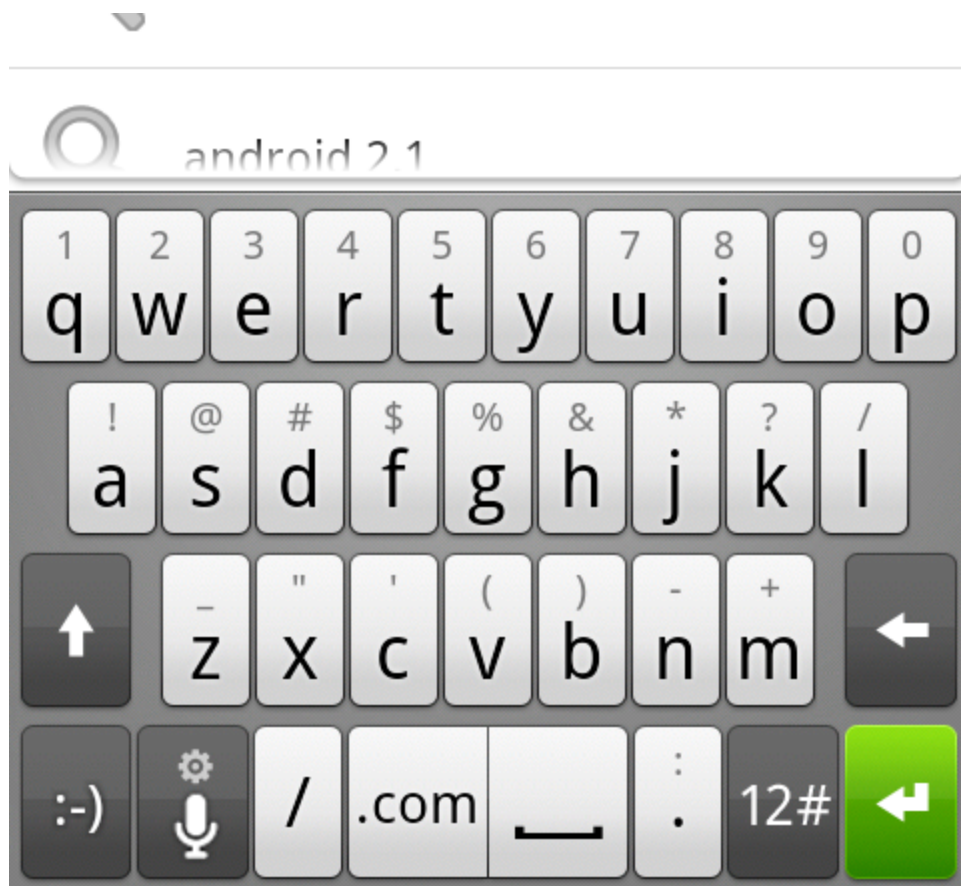
Leo Laporte, host of the *This Week in Tech* podcast (and, more apropos, *This Week in Google*), put it best: for Google to understand what you're saying, you should speak like a radio host. Enunciate, slow down, and maintain a constant kind of "lift" while talking. If that all seems like too much, or it's too awkward, just stick with the slowing down. You can speak your punctuation, saying "comma," "period," or "question mark" out loud. Don't be afraid to use city or place names, either—the audio's being passed to Google, which, as you might imagine, has a pretty big database of locations.

How does Google know how to convert what you're saying into text?

Since April of 2007, Google has offered a free phone-based business directory service, or 411 line: GOOG-411. Everyone in the U.S. or Canada who calls 1-800-GOOG-411 (1-800-466-4411) and says the business they're looking for, along with city and state, can be connected for free, or have additional information sent by text message.

As you might have guessed, Google has been using all that speech—in particular, the [phonemes](#) of regional dialects—and the search results they're connected to in order to build a pretty huge speech recognition database. It is far, far from perfect, but it's also surprisingly good at times.

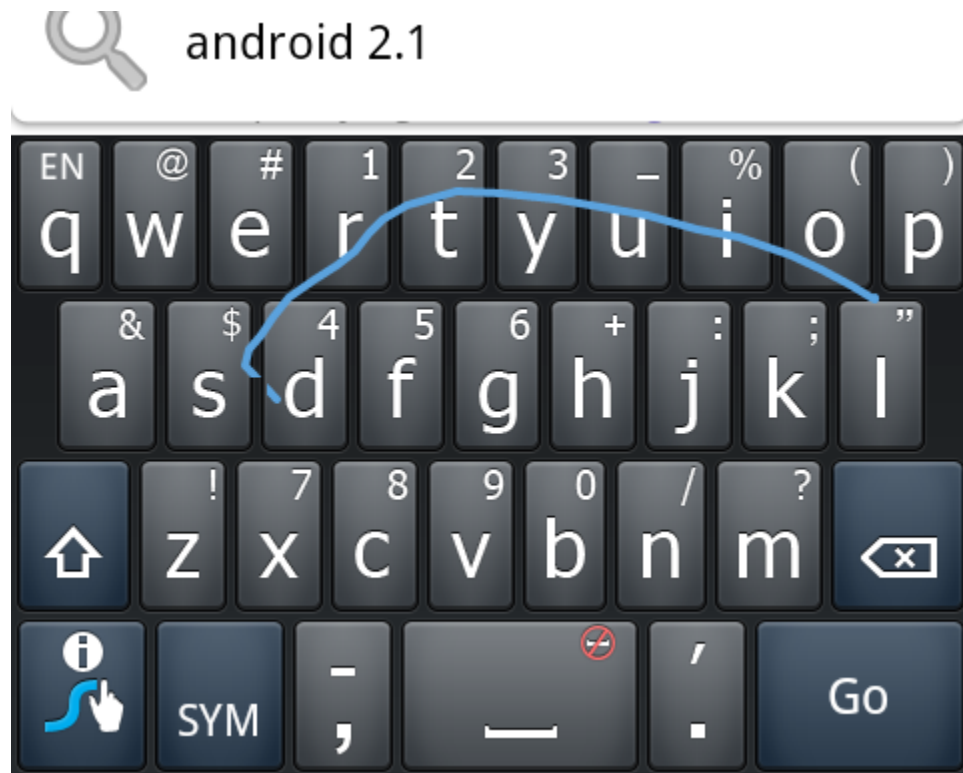
Alternate Keyboards



HTC's Keyboard, Included by Default on Phones with "Sense" Interfaces

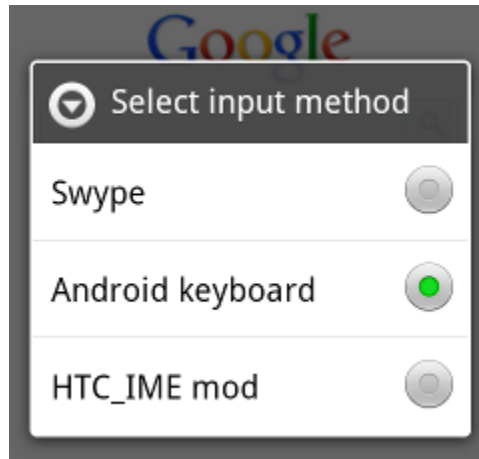
Not every phone comes with Google's own keyboard installed as the default, and not every phone has to keep it around. In fact, many of the phones manufactured by HTC—the Hero, the Droid Incredible, and the EVO 4G—feature their own keyboard configuration as part of the HTC Sense theme. It's unique from the stock Android keyboard in many ways, including the rounding of buttons, the

inclusion of "upper" characters you can access by holding down a key, only offering predictive word suggestions when in landscape mode, and the inclusion of a ".com" shortcut button. There are also a slew of specific settings, available in the same place as your standard keyboard.



Trailing Your Finger Around the Swype Keyboards to Make it Guess Your Words

Look around in Android's Market, and poke around the web, and you'll likely find quite a few keyboard apps and alternatives. One of the most interesting categories contains gesture-based keyboards like [Swype](#), [ShapeWriter](#), and [SlideIT](#). They all work on the same principle: rather than lowering and raising your finger, tapping on each letter in a word, you can slide your finger over each letter in your word. These keyboard apps will look at the shape you've "drawn" with your finger, note the turns and pivots, and enter in your word with surprising accuracy. Most of them aren't totally free apps, but they're worth checking out, especially if you're using your phone one-handed far more often than the two-fisted mode.



Keyboard App Alternatives and the Android Default

Say you've installed Swype/ShapeWriter/SlideIT/etc., or maybe you found a neat hack to install the stock Android keyboard on an HTC Sense phone, or vice-versa. How do you switch between them? The easy way is to press and hold on any area where you'd enter text, then select "Input method" from the pop-out menu. You'll get a list of all your available keyboards. I use this quite often with my preferred keyboard, Swype, because Swype doesn't offer a voice input button while the standard Android keyboard does. Not seeing a keyboard you installed in the list? Head to your Keyboard & language settings in the main Settings app and make sure there's a check next to it to enable it.

There's a lot more to a keyboard than just typing, eh? Now that you're familiar with all the ways you can enter text, let's get better at the other controls on your phone.

Buttons and Finger Controls



Android Buttons.

Every Android phone comes with at least four buttons on its face, whether they're on actual, physical, press-and-release buttons, or touch-sensitive "soft" buttons. Most Android phones will also come with a trackball or similar tracking device, and some will come with hardware buttons for powering the phone on and off, and perhaps for hanging up calls or powering off.

What do these buttons do? In part, that depends on what application you're using, but the four main buttons that every phone carries do have some nearly universal purposes. We'll examine and explain the buttons on the Nexus One as an example, but these buttons serve much the same purpose on any Android model.

Home



Home Button

This is the most universal of buttons, besides, perhaps, the power switch. Tap it at any time on your phone, and it drops out of whatever application you're using, bringing you right back to your central home screen. The Home button doesn't usually "close" that application, though, so if you're in the middle of writing an email, clicking on Gmail again should return you to that text field, with none of your text lost. That's a nice thing for the sanity of the thick-fingered, no? If you're on a different section of your home screens than the center, hitting Home brings you back to the center.

On HTC phones, pressing the Home button while on the central home screen brings up a Mac-style layout of all your home panels and their contents so you can easily switch to, say, your Twitter and Facebook widgets on the far-right screen. On some of Motorola's Droid models, pressing Home while on the central home screen pops up your app list, just as if you'd pressed the middle icon at the bottom of your phone's screen.

Holding down the Home button has a different effect: launching a pop-up window that shows the six most recent applications you've opened and used from your phone. You can tap any of them with your finger to pop them open, or scroll to an app with your tracking device and press to open. It's kind of a complimentary function to the

tapping function—if you accidentally tapped Home while you were reading Facebook updates, holding down Home will let you click back into Facebook, right where you left off.

Back

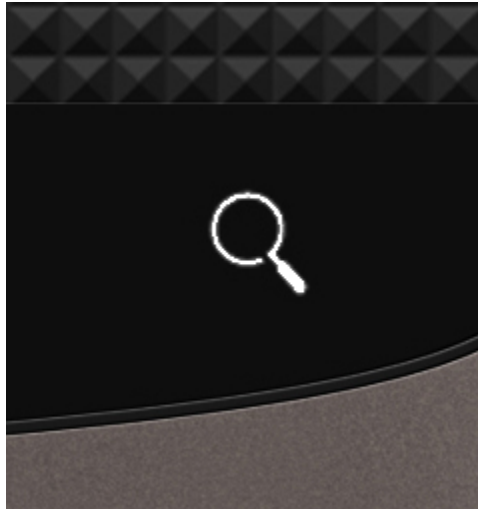


Back Button

Back does pretty much just what you'd think it does. In most applications, hitting Back brings you to the screen you were on before the one you're currently looking at. Holding it down in some applications flips (very) rapidly back, likely bringing you back to the home screen. In other applications, holding down Back simply counts as if you're pressed it once.

The one default application where Back has a special purpose is the browser. In your standard Browser, and most other browsers you can download, Back works like the back button in a browser, taking you to the previous web page you had visited. Hold down Back, and you'll see your browser history listed, from which you can tap and pick any page you were on in the recent past.

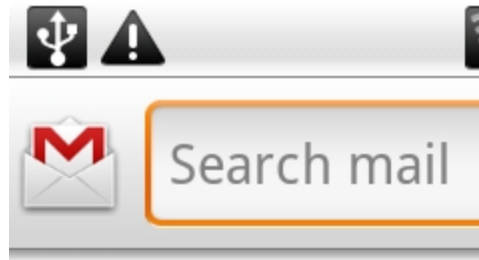
Search



Search Button

From the home screen, or from most applications, tapping the magnifying glass icon of the Search button brings up the Quick Search Box. It loads up a text box at the top of your screen, brings up the keyboard, and searches nearly your entire phone for whatever you're typing. Next to the text box, there's another magnifying glass button that performs the search, and a microphone icon that lets you speak your search rather than type it. Voice commands are a fairly amazing part of using an Android phone, and we're covering that in the next chapter.

You can change what Quick Search covers in your Settings ("Searchable items," under the Search sub-menu), but without changing anything, you'll see contact names and data, browser bookmarks and history, and installed applications show up as you start to type. Type out a web address (lifehacker.com), hit Enter or the search button up top, and you'll head there. Write a search phrase ("best custard Boston"), and you'll get quick Google results (unless your phone is set to use another search engine as its default).



Tomatillo

What You're Searching for is Described in the Search Bar

In *most* applications, hitting the Search button brings up the universal Quick Search bar. In some applications, like Mail, Contacts, and some third-party apps you might install, tapping Search searches the application you're in—digging through email messages, looking up contacts, or displaying something related to the application. To know whether you're pulling off a universal search of your phone data, versus searching in that application, pay attention to the text that's inside the text box when it pops up. If you're performing a general search, the faded grey text will read "Quick Search Box." If the application you're in has a special use for the Search button, it will read something like "Search mail," "Search contacts," or the like.

What happens when you press and hold down on the Search button? No matter what you're doing on the phone, it launches the Voice Search application. More to the point, it gears up for a second, then starts listening to what you've got to say. In most cases, what you say turns into a search on Google, after the audio is passed to Google and its servers have a chance to transcribe your spoken words into text. You can also call contacts and get turn-by-turn directions to a location by simply stating its name—again, a cool thing we'll cover just a few pages further in.

Menu



Menu Button

Pressing the Menu button does something different on almost every screen of your phone. In almost every case, it pops up a white tiled menu on the bottom of your screen, giving you access to things that are either deeper options, that don't quite fit on the screen, or that are just more explicitly explained.

From the home screen, for instance, the Menu key offers options to add an item to that screen, change the wallpaper, open the Quick Search Box, see what notifications are waiting, or enter the system settings. All but the last of these options can be accessed elsewhere on the screen—pressing and holding on a blank space, tapping the Search button, pulling down the notification "shade," etc. In other applications, tapping the Menu key might offer some crucial functionality that isn't easy to incorporate into a screen—a link for composing a new email or Twitter message, adding a new contact, or changing the settings. If you can't figure out how to do something in an application from looking at it, the answer is, more often than not, tucked in the Menu key's pop-up.



Menu Button on a Droid X

Some phone makers have changed the look and feel of the Menu button from Google's own design. Motorola prefers a somewhat abstract four-square icon, with the upper-left icon filled in.

Tapping and holding on the Menu key brings up the keyboard for typing under any circumstance. It's a helpful fall-back for when applications fail to bring up the keyboard on their own and, if you start typing, it's a shortcut to using the Quick Search Box to pull off Google searches from anywhere on your phone.

The Trackball



Moving an App Icon

There is nothing the trackball does that you can't do with your fingers, and that's why some Android phones have skipped them entirely. For a few things, though, the trackball—or, on some phones, the optical tracking sensor—is more convenient.

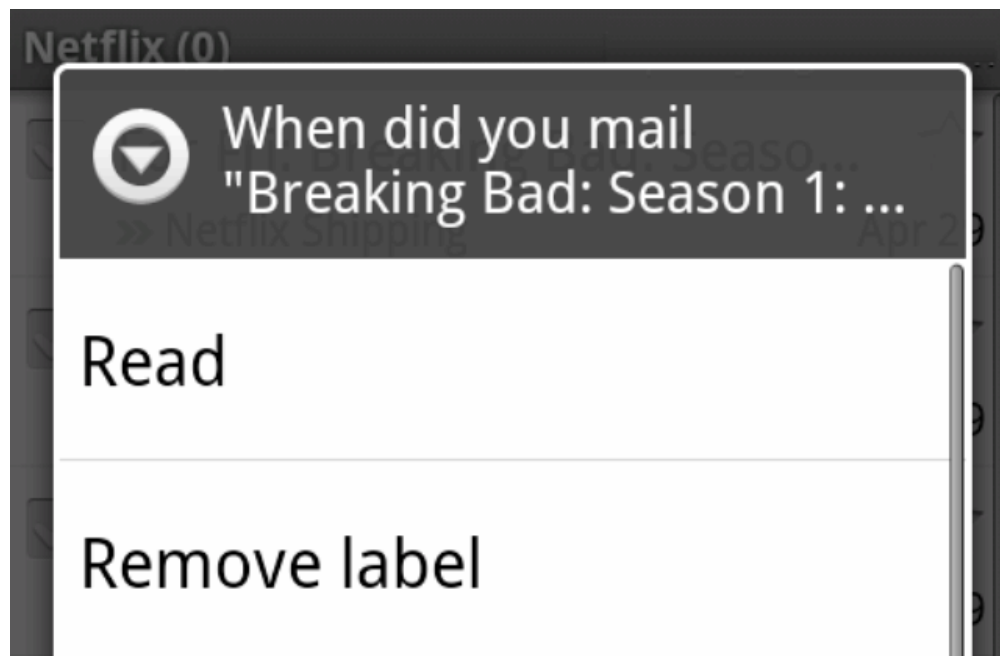
The main thing Android users need the trackball for is fixing up text. While typing with the on-screen keyboard, scrolling the trackball left and right moves the cursor around in a more precise fashion than stabbing around with your finger trying to pinpoint the spot between the "T" and the "H" in "the." When selecting text to copy from a web page or other text, the trackball is how you map out the amount of text you want copied.

The trackball is also a handy tool for apps that let you draw, control a cursor, or otherwise get semi-precise control, and a few games have made clever use of it. It can sometimes be more comfortable to scroll through a long list of items—email, messages, items for sale—with the trackball than having to "push" the screen upwards. Clicking down with the trackball serves the same function as pressing with your finger, and holding down the trackball replicates the behavior of pressing and holding with a finger. When you're navigating web pages with tiny links and controls designed for laptops and desktop computer browsers, the trackball can be very handy indeed.

The trackball on the Nexus One, and likely future Android phones, also serves as an indicator for new messages. When new emails, SMS messages, updates to Market applications, or other notifications from your applications arrive, the trackball will pulse with a white glow. In the settings for each application, you can change or disable the light-up behavior of the trackball (or LED light near the top of the screen, on some phones).

Finger Controls

How to control things on your Android phone with your fingers should be, for the most part, obvious. Swipe up to scroll down, and swipe down to scroll up, as if you had a long scroll of paper in front of you, or were using a microfilm projector. Pressing down briefly on an item is the equivalent of the "clicking" you'd do with a computer mouse. Pressing and holding is the thing as a "right click" on a standard computer—it reveals further actions you can perform on whatever you've selected.

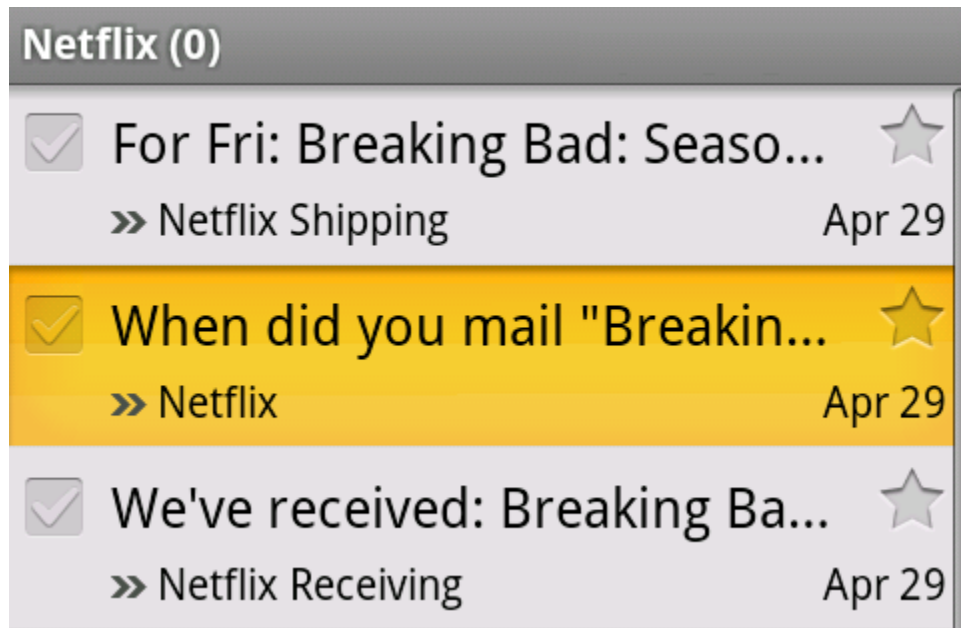


Long Pressing (press and hold) brings up extra actions, like a right click on a PC



Check Boxes to perform one action to multiple items

Some applications you can download, and some in your own phone, prefer a few other kinds of controls, either for style or perceived ease of use. In applications such as Gmail, where you might want to do the same thing to a lot of different things, you'll get check boxes to toggle and buttons that pop up to let you do something to those items you checked.



Pressing an Email

Some applications also have tucked all the additional things you can do to an object into an arrow or some other kind of pointing marker on the sides. In the example of the official Android application from the messaging service Twitter, clicking a tweet doesn't actually do anything, but clicking the downward-facing arrow to the right brings up a dialog-balloon-style menu of options.



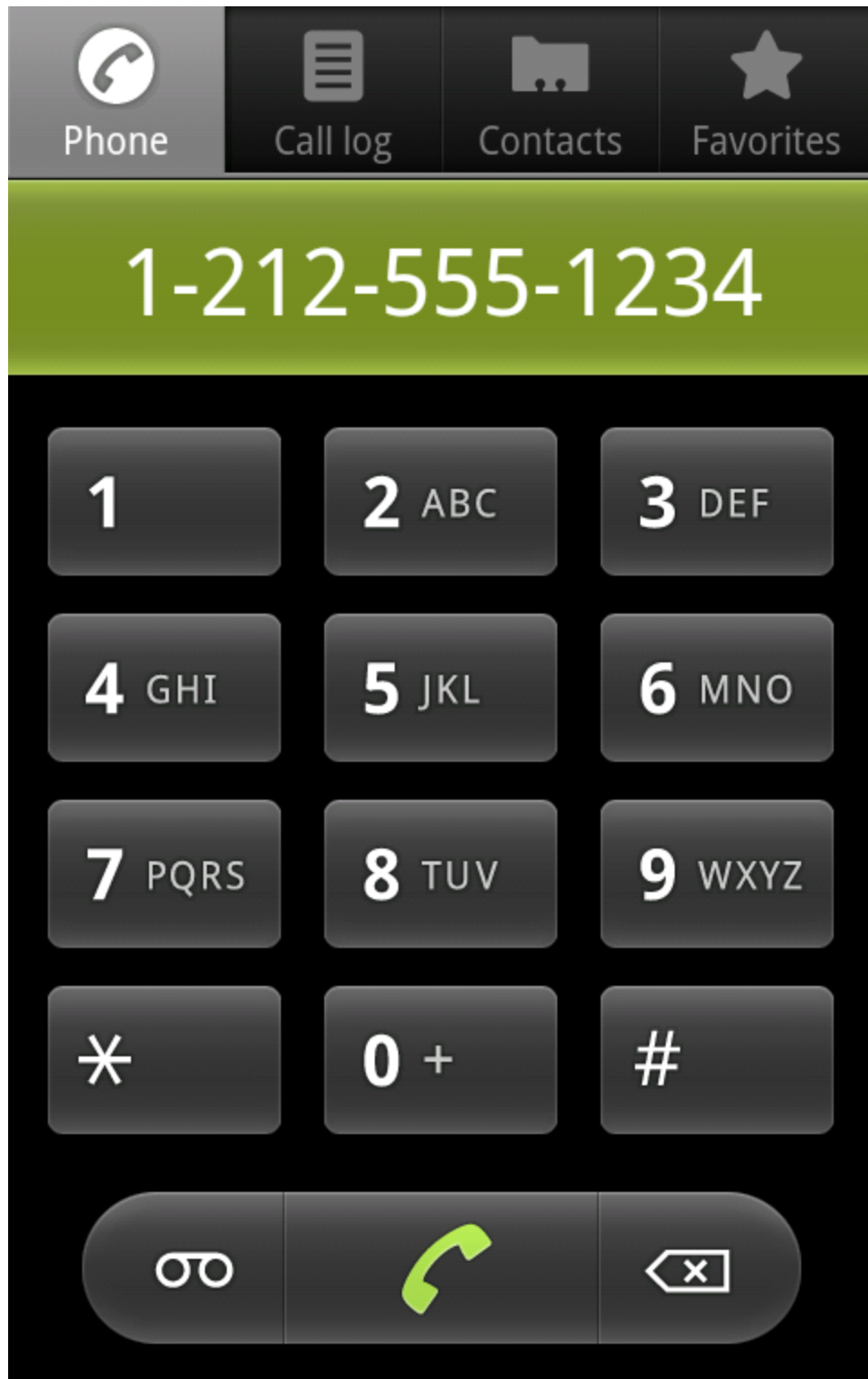
Drop Down Action Menu on Twitter App

In certain applications, like the browser, the photo Gallery, and some document viewers, you can use your fingers to zoom in and out of an image—the "pinch-to-zoom" action that iPhone users learn as second nature. It's hard to put in a picture, but you'll likely figure it out. Place two fingers on the screen, close to the center, and expand them, as if you had an expandable magnifying glass between your fingers that focused in closer as you spread your fingers apart. Bring your fingers in together in a "pinch" motion, and you'll zoom out. We'll dig into how zooming and focusing works in the browser and Gallery apps in the section devoted to those applications.

Making Calls, Sending Texts, Managing Contacts

At one point in the not-so-distant past, cell phones were primarily used to make and receive audio phone calls, as old-timey as that sounds. Your souped-up Android phone can, of course, make phone calls, send SMS ("text") messages, and keep a pretty convenient contact list that's constantly backed up to Google's servers. You can also call customer service numbers right from a web page, send text messages over the web, and listen to your voicemail without having to use any voice plan minutes. Off we go.

Dialing a Number

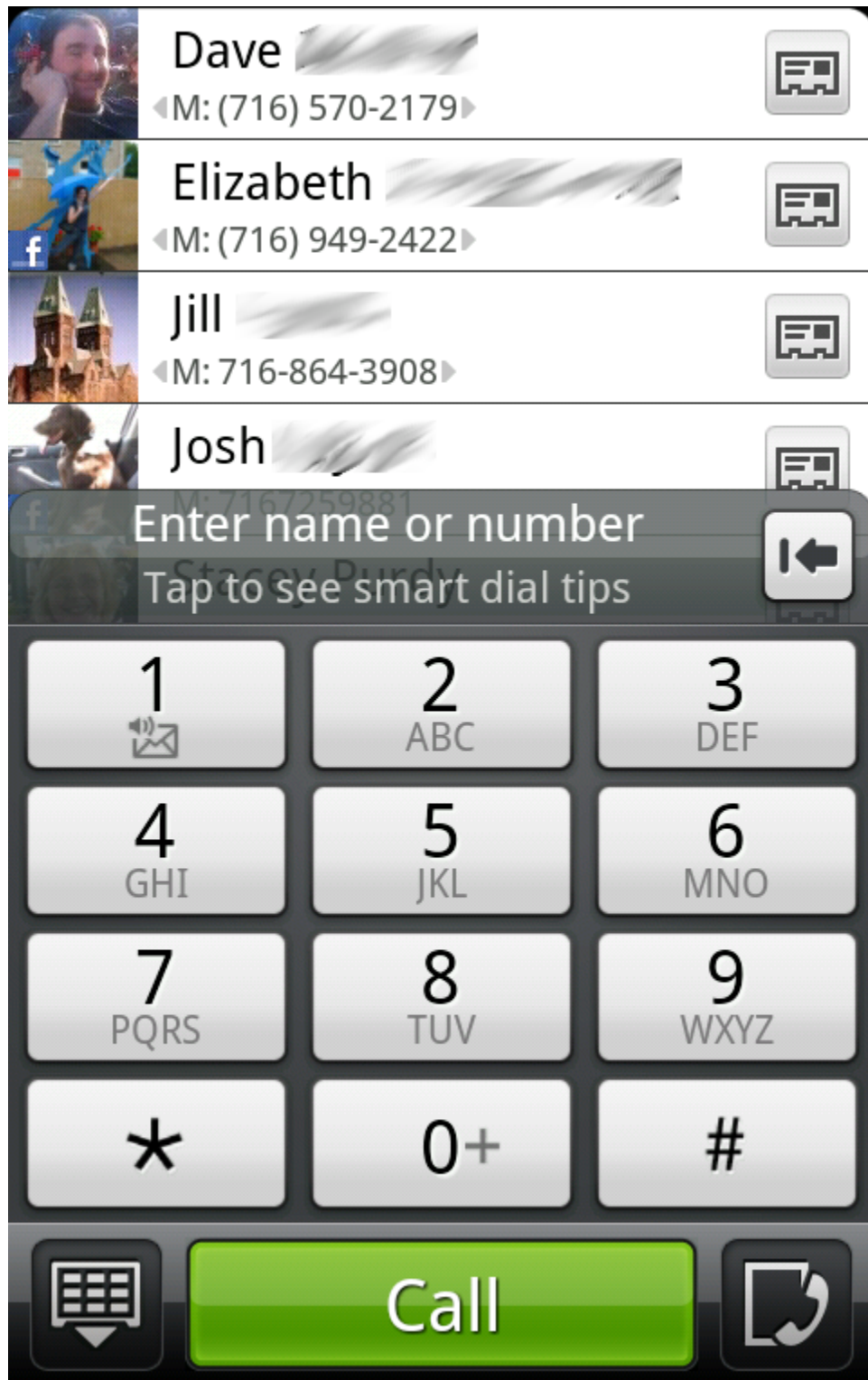


Number Dialing

When you first get your Android phone, there will be a Phone shortcut on the central home screen. This is really just a shortcut to

the "Phone" tab inside the Contacts application. You'll probably want to replace Phone with Contacts on the home screen, because you will, like I do, call contacts you know more than punching in assorted numbers. For those customer service calls and first-time dials, though, Phone works like any 12-button touchpad. Most phones will vibrate as you tap the numbers. The bottom row contains, from left to right, a shortcut button for dialing voicemail, a green call button to make the connection (though you can also hit your phone's green call button if it has one), and a backspace/delete key to fix your mistakes.

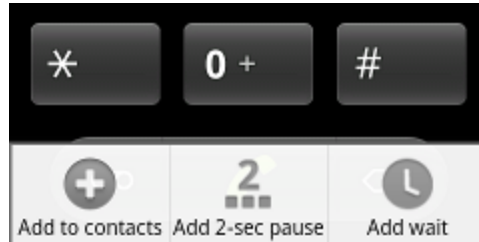
HTC phones have their own permanent "Phone" button on every home screen, along with a very different Dialer setup:



HTC Model Phone Screen

The Sense dialer, shown above, works more like the contacts list on clamshell phones without full keyboards. Use the number keys to tap

out the first few letters of a contact's name (8-4-6 for "T-I-M," for example), and their name should appear in the list above the keypad.

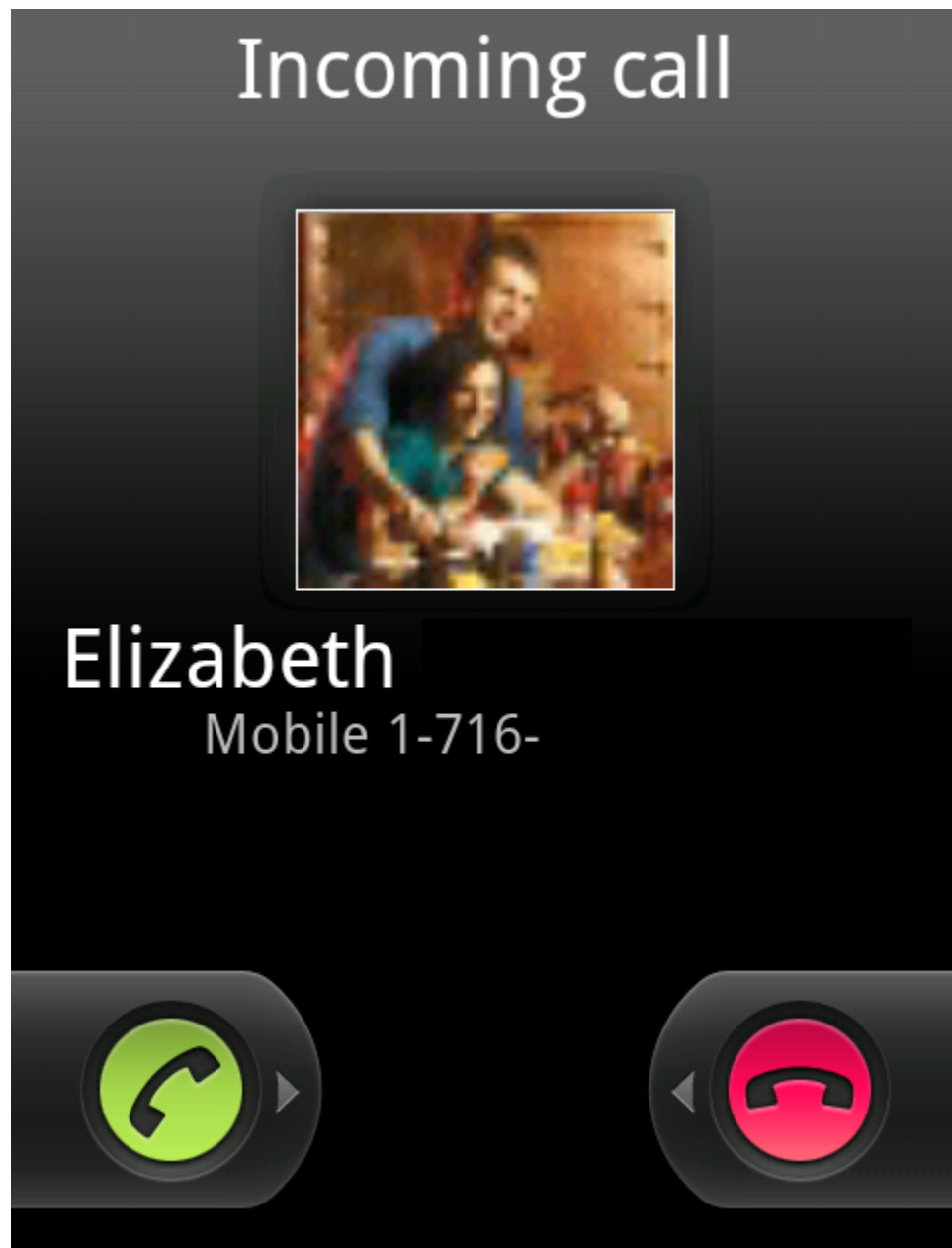


Pause Option for Corporate Phone Systems

If you're dialing a number that you plan on calling again, hit your phone's Menu button after you finish entering the number. You'll see a menu pop up, and "Add to contacts" will transfer the number to your contacts, as well as give you an entry form to add a name and other details. If you're dialing a corporate phone system that requires a pause before punching in a code, you can add a series of two-second pauses from this menu, or a "wait" that holds until a response is received before entering further numbers.

Receiving Calls

Your phone may buzz, blink, and beep for all kinds of messages, but it reserves a long, sustained ringtone, or a long vibration, for phone calls. When you get a call, you'll pull out your phone, and the screen will have two "sliders" near the bottom left and right of your screen, about where your thumb will be resting.

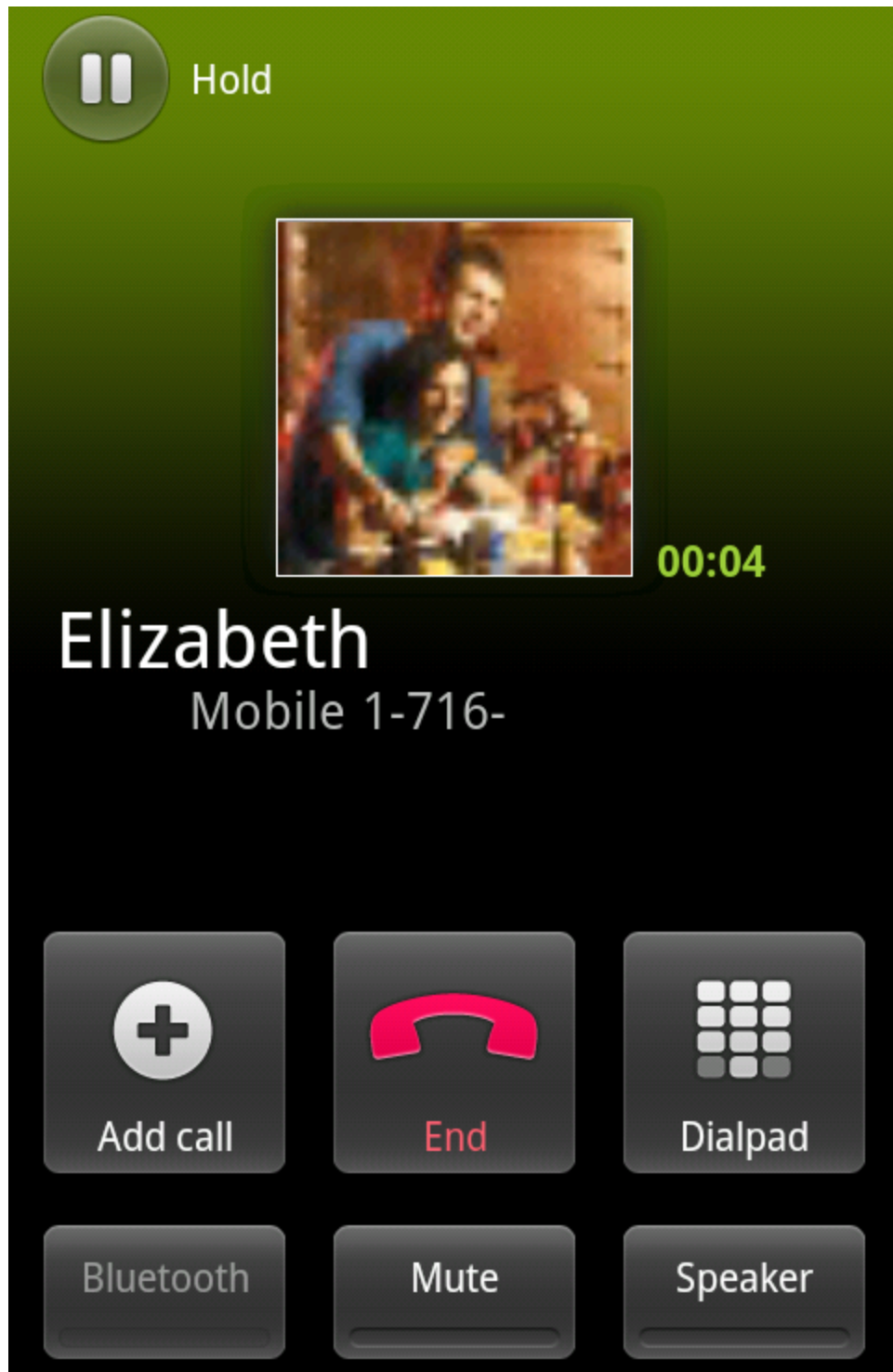


Incoming Call View

As you've probably guessed, you press near the green button and slide it right to answer the call. To "ignore" it, or send it to voicemail, press and slide the red button toward the left. The buttons may change on certain phones, but the actions and their results are the same. You can also simply lower the volume on your phone to stop the ringing or vibrating, and the caller will eventually reach your voicemail prompt. It's an important distinction, because using the red

ignore button will send a caller straight to voicemail—a social etiquette lesson your author has learned too many times.

If you slide right to accept the call, you'll probably put it against your ear, and your phone will automatically turn off the screen so as not to waste battery life or accidentally let you type with your ear. If you pull the phone away from your ear, most likely to end it, you'll see an in-call options screen.



In-Call Options Screen

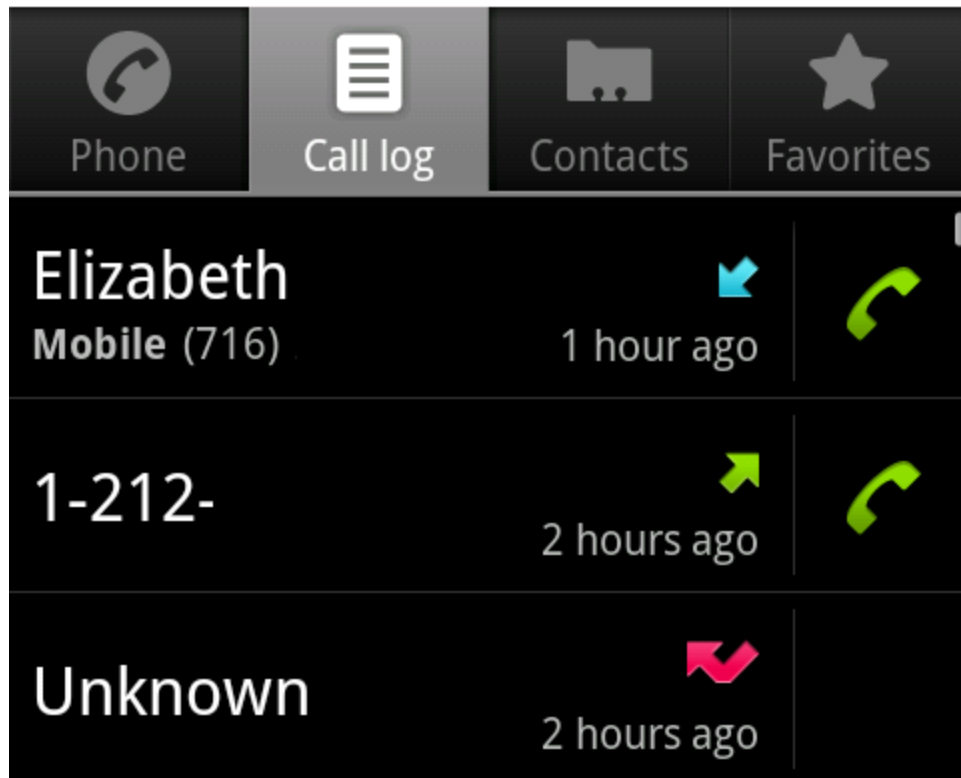
If your contact has uploaded a picture as a Google Talk or Gmail icon, or if you're connected on Facebook, you may see their picture

when they call and on the in-progress screen, as pictured here. Otherwise, it's likely just a number and a generic Android icon.

Most of the options and labels here are self-explanatory. Hitting the button labeled Hold mutes the sound both ways, for when you need to walk around or, more likely, pull up something else on your phone. Slightly to the right of your friend's picture (or Android icon), a counter shows how long the call has run so far. The End Call button is red and centered, and it's the most frequently used button. If you've got a red button on your phone, it serves the same purpose.

Among the other options, Add Call lets you ring up another contact and bring them in for a three-way conversation. Dialpad brings up the familiar 12 keys for number entry. If you've configured a Bluetooth headset or earpiece, hitting that Bluetooth button moves the call audio to it. Mute quiets the audio from your end, not the audio from the other end. And Speaker turns on the phone's louder speakers and wider-area microphone.

The Call Log (or "Recent")



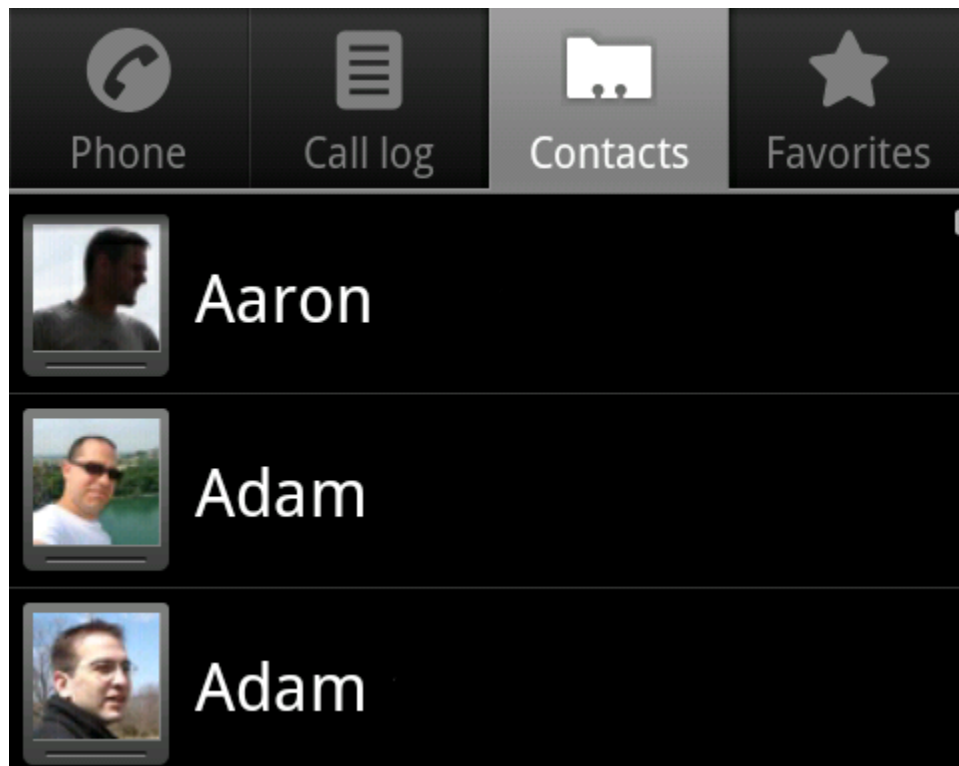
Call Log View

The tab to the right of your Phone dialer keeps track of the calls you've made, received, and missed. It's called "Call log" on standard Android phones or "Recent" on some Droid models. A green arrow indicates a call you made, a blue arrow a call received, and a red call one you missed (or chose to ignore). You can hit the green phone icon to the right of any call to quickly dial that number, or press and hold on any for some options, like editing the number, sending a text message instead, adding to your contacts, or removing just that one call from your call log. If you want to clear out all your calls and start re-building the log, hit the Menu key, then select Clear call log when it appears.

Contacts and Favorites

When you first activated your phone, you either signed into an existing Google account or created a new one. If you've used Gmail,

Google Voice, Google Talk, or any other Google service to send or receive messages, you've already got a list of Google Contacts. As you make and receive calls and SMS messages on your phone, you're adding to those Google Contacts. Even if you don't care a lick about having your contacts connected to Google, it's an automatic backup service—and that's never a bad thing.

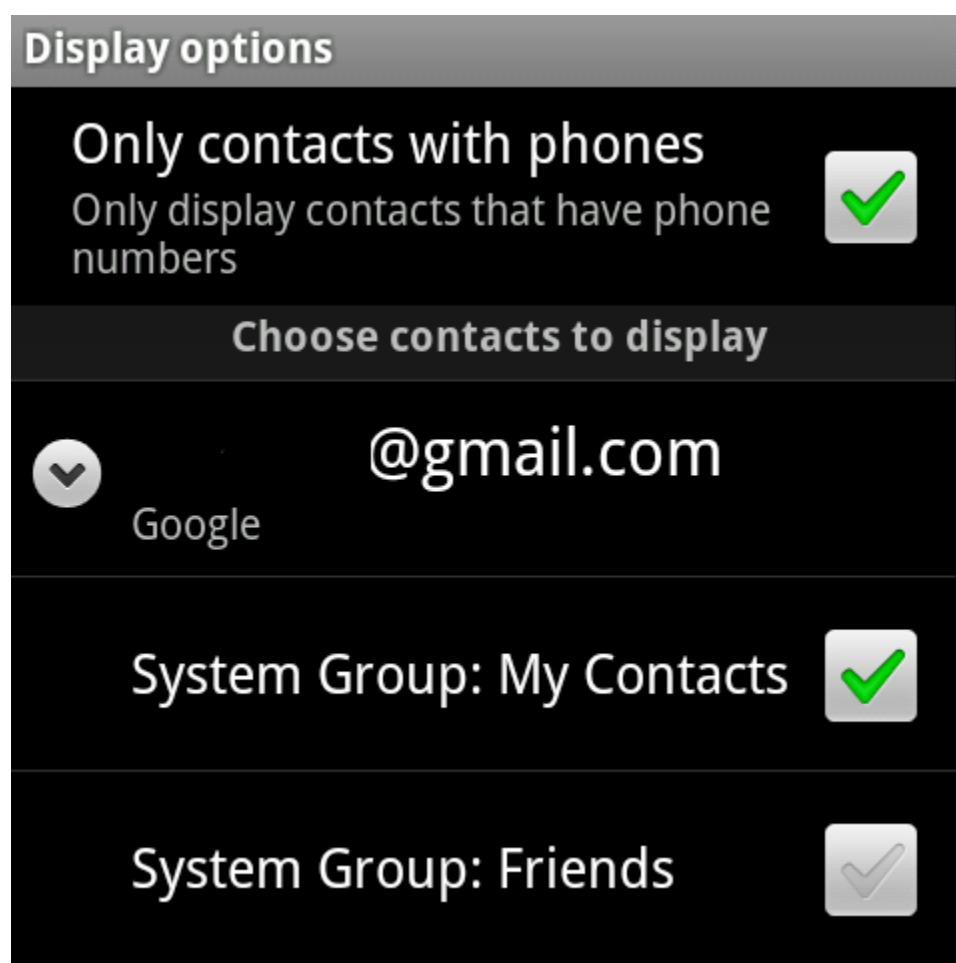


Contacts Screen

You get to your contacts by opening the Contacts shortcut from your application tray or by clicking over to the Contacts tab from the Phone shortcut. It's alphabetical by first name, and you can scroll through it with your finger to cover a few contacts at a time. As you start scrolling, you'll see a tab appear on the far right, which you can then grab with your finger and scroll much faster through the list. Even faster? Hit the Menu button and choose search, then start typing the first or last name of the person you're trying to call, text, email, or otherwise reach. If you've got a hardware keyboard, you can flip it out and start typing to get there without having to press Search.

What you see in Contacts, by default, is everybody in your "My Contacts" section of your Google Contacts. If you haven't used Google's online services that much, you pretty much see a list of everybody you've called, emailed, or sent an SMS. That can be a bit overwhelming, for sure, given Google's tenacity at remembering three other people named Pete you emailed during an apartment search five years ago.

Want to limit and edit your Contacts list? Hit the Menu key with your Contacts open, and select "Display Options."



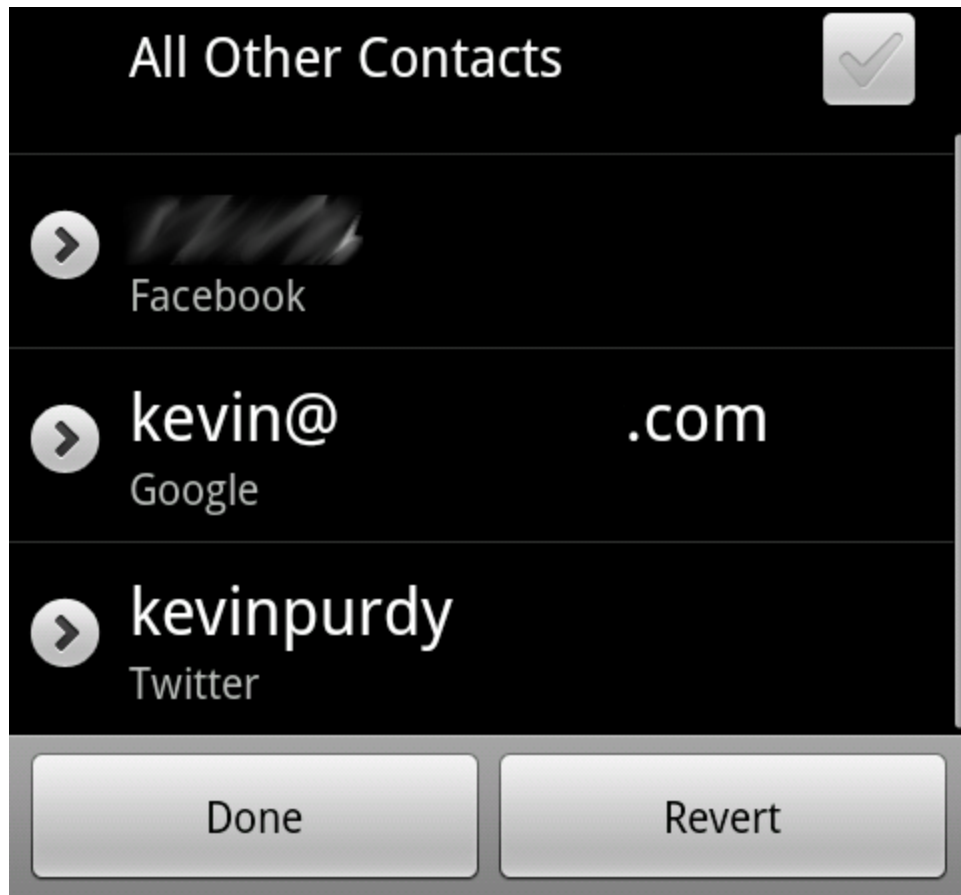
Editing Your Contacts

The first option, "Only contacts with phones," will cut a lot of the fluff out of a meaty contact list. You'll still see your email contacts, and Facebook or Twitter friends, when you're using those applications,

but your Contacts list itself will be strictly a phone list. Below that, you can click on your main Google/Gmail account to fine-tune both the Google Contacts that are shown, and fine-grain control which contacts from other apps are shown.

What is "System Group: My Contacts," and how did it and its other "System Group" cousins get here? They're groups from your Google Contacts. It's not an elegant system, exactly, but to make Gmail a different kind of email provider, Google semi-automated the management of contacts. Once you've sent any kind of email back and forth with somebody, they end up as a Contact. If you've traded a few emails back and forth, and Google's mathematical formula deems you to be fairly copacetic, that other person gets copied into "My Contacts." In theory, this should save you headaches. In practice, it is its own unique kind of migraine.

Almost as if to confess to its confusion, Google's Contacts on Android lets you choose which Google Contacts groups to sync, so that you can have your whole Google-y world linked up by checking each group, along with "All Other Contacts," or just sync up "My Contacts," or whatever other group you've chosen. We'll make our own syncing group in just a bit—for now, let's finish up with what we have in the "Display Options."



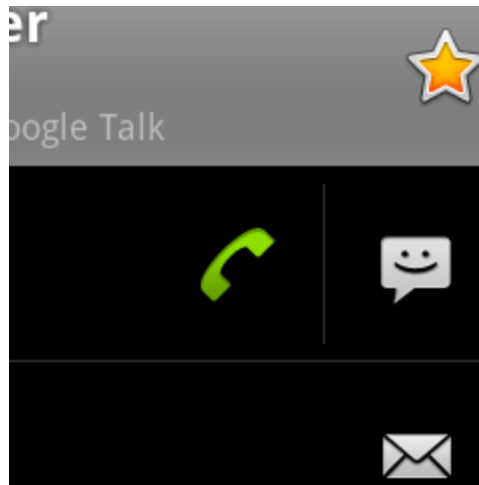
Syncing Twitter, Facebook, e-mail etc. with contacts

Just below your main Google account listing you'll see the syncing options for any other email accounts you've set up on your phone, along with social networks like Facebook or Twitter, and any other application where you'd build your own contact list. Click on these accounts, and you'll see an option to sync "All Contacts." Check it and you'll be able to call Facebook friends and their profile pictures with their phone numbers listed, view Twitter profiles by searching for users' real names, and otherwise augment your contact list.

Favorites/"Starred" Contacts

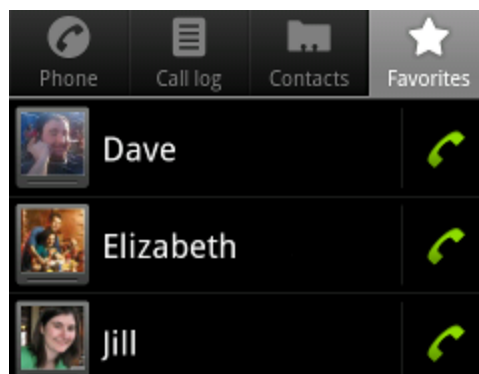
Most people have a small circle of friends, family, and close co-workers that they frequently call, text, email, and otherwise contact. From your Android Contacts, you can single out these frequent

contacts by "Starring" them, and making them part of your Favorites group.



A "Starred" Contact

You can add that "star" by clicking on any contact name in your list, then tapping the star that appears in the upper-right corner of their contact details. As you might have guessed, you can also press and hold on a contact name to pop up an options menu, then select "Add to favorites."



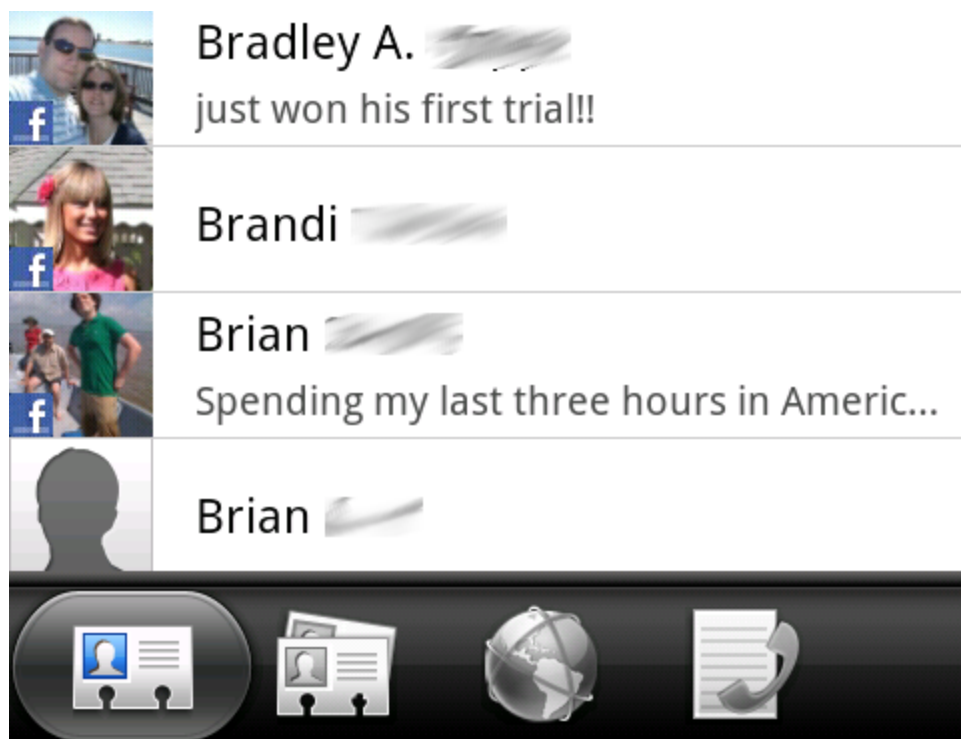
Favorite Contacts List

As you do that, you'll start seeing your chosen contacts in the Favorites list. You can quickly call their default number, most likely a cellphone, by touching the green phone icon on the right-hand side or by clicking their name for other numbers and contact means. Want to change the primary calling number? Click the contact name, press

and hold on the number you most frequently call, and select "Set as default."

Scroll below your list of starred/favorite contacts, and you'll see an automatically generated list of frequently called (and text-messaged) contacts. Convenient enough, but you can't, unfortunately, change this list or clear it out for a reset.

HTC's "People" App

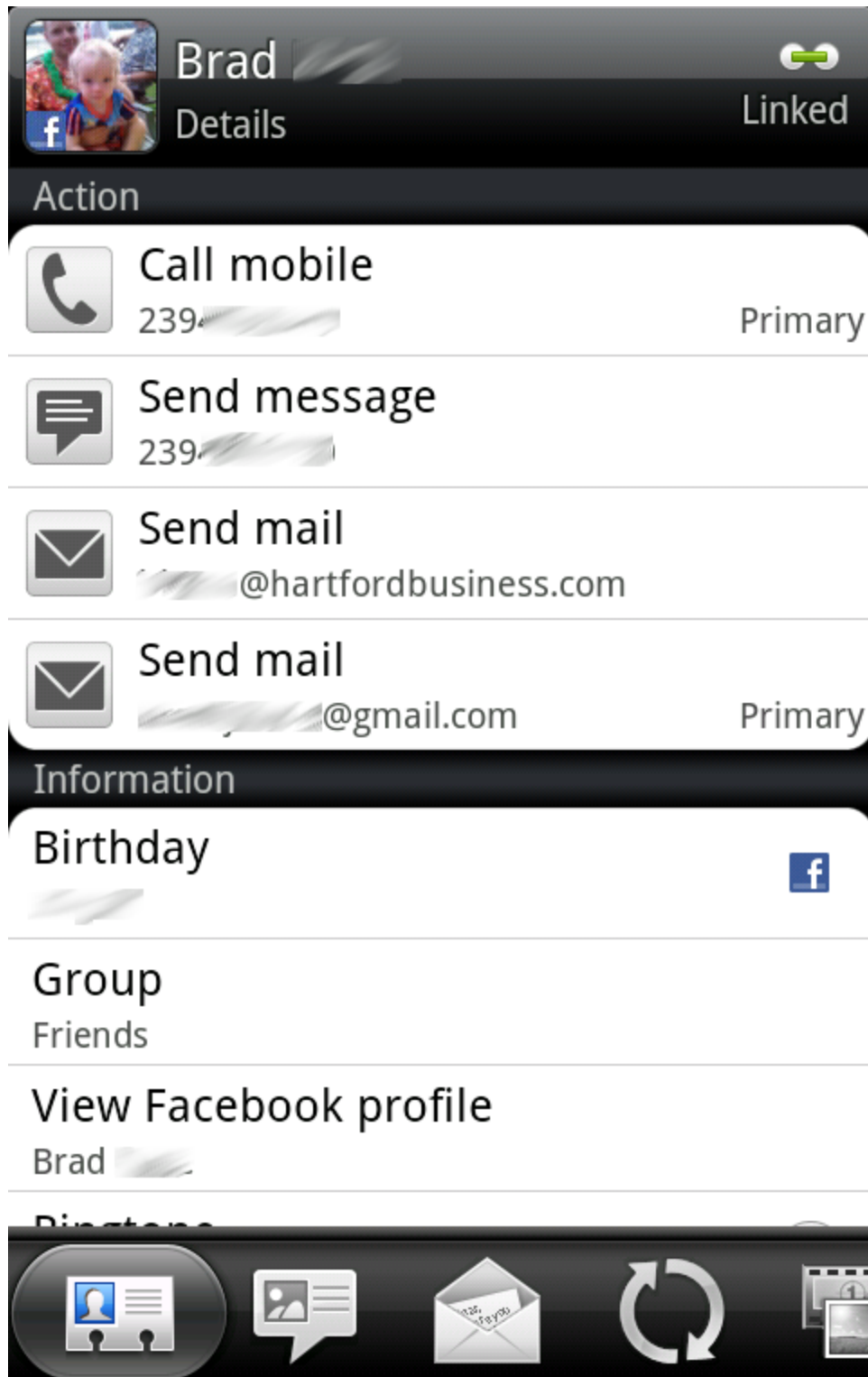


Contacts in HTC with the "People App"

On HTC phones with the Sense UI, the integrated dialer/contacts app is replaced with an app named "People." It adds a lot more customization and social network integration, and works in a very different fashion.

Tabs at the bottom of the screen break up your views of your contacts. The left-most tab shows "All" contacts. To the right, the icon with two cards shows your "Groups," culled from your Google

Contacts and habits on your phone to create Favorites and the like. The globe icon circled by rings lets you look through specific directories: those with your same email address for a "Company directory," along with contacts you know through Facebook, Flickr, Twitter, or other networks you've hooked your phone into. The right-most icon, a phone hovering over a list, is, as you probably guessed, your "Call history" listing. Click on a contact from the first three screens, or press and hold on a call log entry, and you'll see everything your HTC phone knows about them:

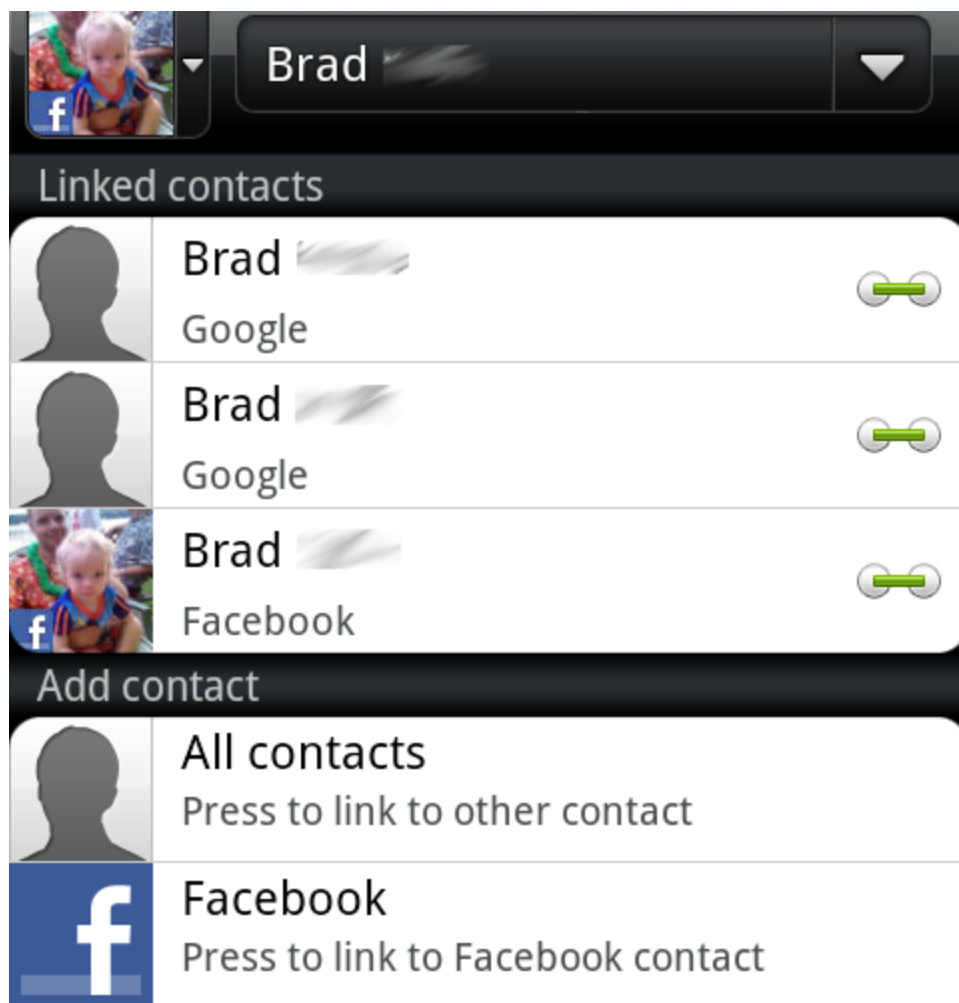


People App Contact Details

Everything that's in your synced Google Contacts, or found in your Facebook, Twitter, or Flickr accounts, is stashed on these pages

along with any other information from apps that offer contact syncing. It's easy to launch a phone call, SMS message, email, or other communication from both the information fields and the icons at the bottom of the contact page.

But what if you know that you're friends with John Smith on Facebook, but your phone doesn't know that? You'll probably see a number on the "Link" or "Linked" icon in the upper-right corner. Press that icon to make the connection.



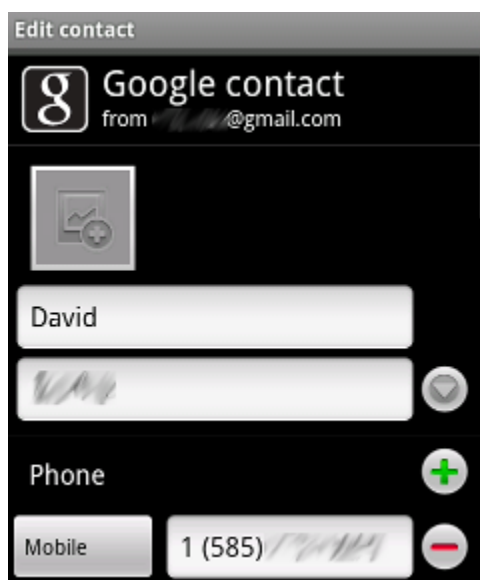
Linking Contacts in HTC People App

You'll see here how you're linked to a particular contact in the top half. If there's a connection to a social network or email address that your phone's not quite sure of—maybe the name is close but not

dead-on—you'll be offered a quick Link button to press. In the bottom half of the screen, you can manually add them from the contact options at the bottom. This comes in handy when, for instance, you're friends with a guy named Steve Jones, but HTC doesn't know that Steve also goes by the name DJ S-Town Steady Droppin' Science on his Facebook profile.

Managing Contacts on Your Phone (and On the Web)

You might call, email, and send SMS messages to a person through your Android phone, and that might create two different phone number entries, along with one or more email addresses. If you're not using Gmail or other Google services, those numbers also lack for recognizable names. Press and hold on any contact, select Edit Contact, and let's make your phone a lot more convenient.



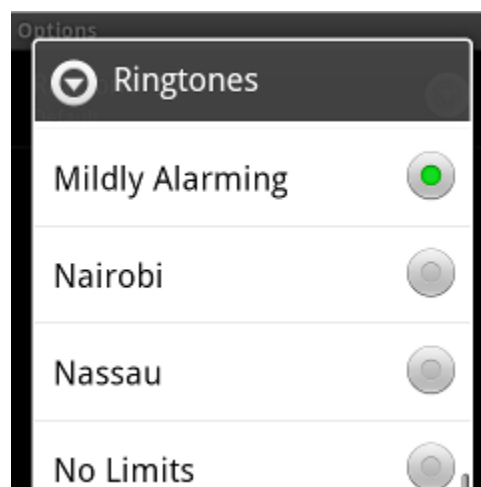
Add emails, postal addresses, IMs, etc. to one contact name

If you're friends with a contact on Facebook, or they've filled out their Google Talk or Gmail profiles with a picture, you'll see it in their contact listing. Otherwise, you can click the "+" icon inside the gray,

empty-looking box, then pick and crop a photo from your Gallery to represent them if you'd like (and we will, I promise, cover the Gallery and photo uploading in another chapter).

Below that, you'll see a series of fields you can fill out or add to. Click the green "+" next to any of the fields offered to add them: Phone, Email, IM, Postal Address, and more. You can fill out this information if you've got it locked in memory, but there's an easier way to fill out your contacts using a full computer mouse and keyboard for speed and convenience. More on that in just a bit.

Back at the individual contact screen, there are three other options available when hitting the Menu button: To "Share" a contact, usually through a Gmail/email message or, if you have it installed, creating a barcode with the Barcode Scanner app. There's an option to Delete a contact, and an Options box (see the "Setting Unique Ringtones" box).



Some Unique Ringtone Options

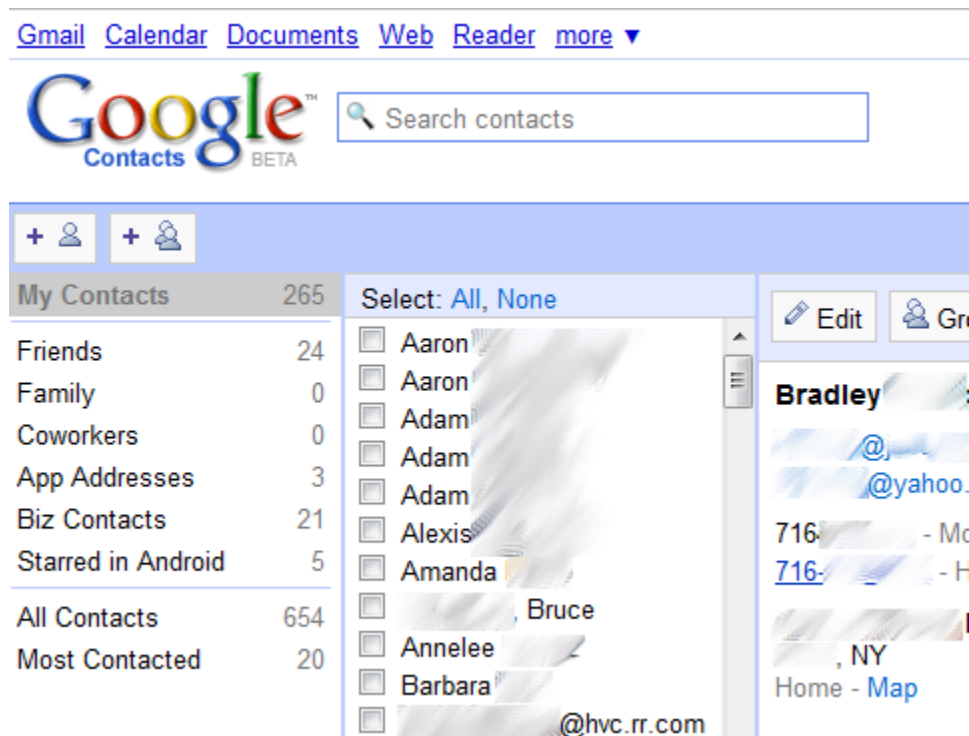
Setting Unique Ringtones and Sending to Voicemail

Let's say you've got certain folks, perhaps co-workers who always seem to call while you're out at dinner, who deserve their own "special" ringtone, or who should always go directly to voicemail. Select their

contact name from your main Contacts list, hit the Menu key, then press the Options button. You'll see two options: a pop-out menu to select a particular ringtone for when this contact calls, and a check box to make all their calls go directly to your voicemail. If the boss asks why, just say your battery was dead from checking in on work email so often.

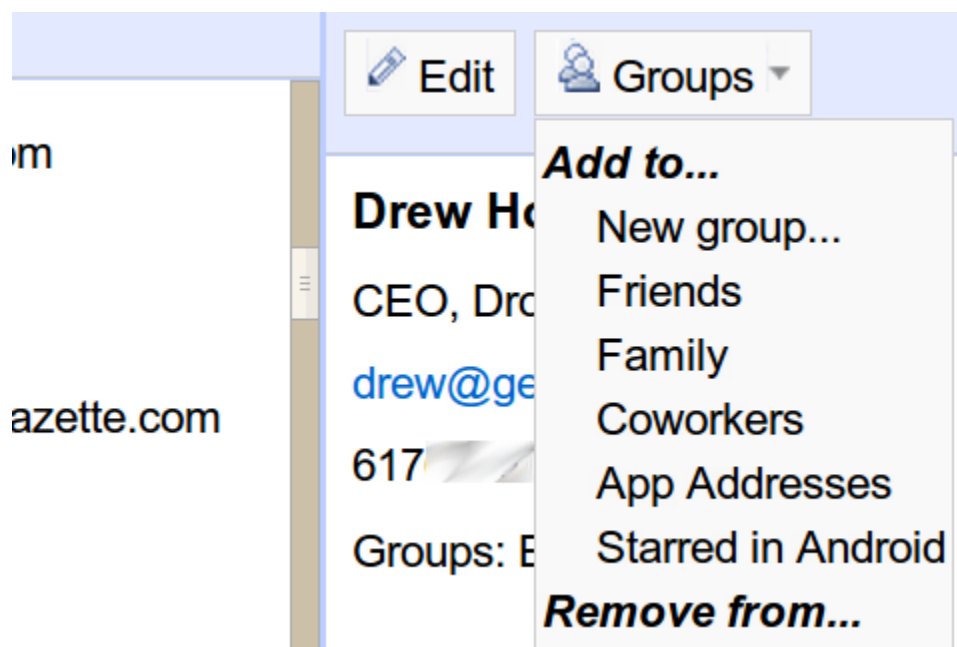
As you can see, you could spend a whole lot of time messing with your contacts and getting them just so on your phone screen. The smarter move, though, is to import, manage, and fine-tune your contacts through Google's own [Contacts](#) site.

Managing Your Contacts on Google Contacts



Google Contacts

Head to google.com/contacts and log in with the same Google/Gmail account you set up on your phone, if you're not already logged in. If you've been using Gmail or any other Google service that relies on sending emails, or setting up contacts on your phone for some time, you'll see a number of contacts already filled in. As noted previously, Google tries to automatically create a frequently accessed group of "My Contacts" from your "All Contacts" group, with some success and a few headaches. It also creates groups for Friends, Family, and Co-workers that you can't get rid of, and after setting up an Android phone, a "Starred in Android" sub-group shows up.

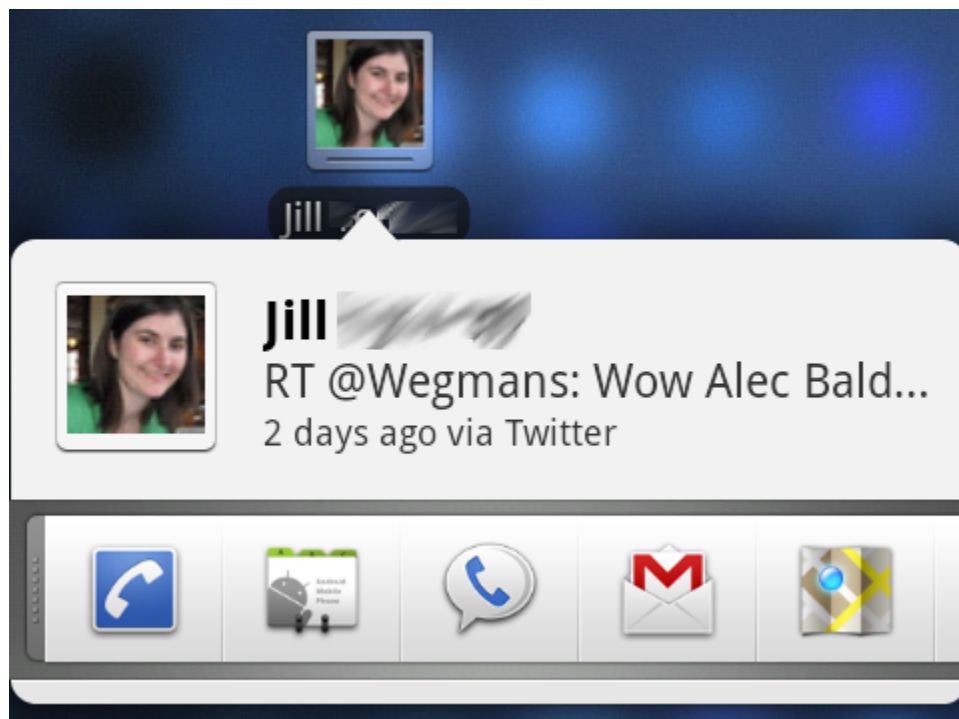


Edit your contacts through Google Contacts on the web

The grouping isn't perfect, but it's a lot easier to edit your contacts on this web page than from your phone's screen. Search out a name or select it from a list, and you can move that person in and out of groups—including your "Starred in Android" group, which will actually edit your "Favorites" list on your phone. Google Contacts can also merge duplicate contacts, which commonly occur when you've emailed and called a person, but never assigned a common name to those two details. At Lifehacker, I've previously written a [complete guide to fixing Google Contacts](#) that dives into the more

advanced features as well as third-party fixes that make setting up your Contacts less painful. The nicest thing is that once you've put in the work to set up your contacts for your phone, they're always available to you on the web, in your Gmail inbox, and everywhere else in the Google-verse.

Adding Contacts to Your Home Screen



Add Frequently Used Contacts to your Home Screen

You have, most likely, a small circle of people you call, text, email, Facebook message, Twitter at, and visit much more frequently than anybody else. Android lets you add those most-contacted contacts directly to your home screens, and get a pop-out menu to reach out to them quickly. Press and hold down on an empty space on your home screen, then choose "Shortcuts" from the menu that pops out. Choose "Contacts" in the next menu, then select the person you want to have on your home screen (HTC owners, look for "People" instead of "Contacts"). Their picture, if available, will show up just above their name, and pressing on their icon provides a menu of

options, pictured here. The basics are a blue phone icon to call their default phone (which you can set on their contact page), a contact card to see all their details, a Voice or SMS-type icon to send a text message, an email icon, a Maps link if you've entered their address, and other options you can access by sliding the panel of options toward the left. You'll also see their latest updates to their Facebook, Twitter, or other accounts, if you have those synced on your phone.

But maybe you don't need all your possible contact options for a certain person—they're somebody you just call, or just send SMS to. Press and hold on your home screen, select "Shortcuts," then pick "Direct dial" or "Direct message" to add a shortcut that calls or text messages that contact, respectively.

Want to keep a whole set of contacts handy on your home screen? Press and hold on your home screen, select "Folders" from the menu, then peep at the options that come up. You can add a folder that actually shows a pop-up list of "All contacts" (not helpful at all, unless your list is very short), a "Contacts with phone numbers" folder to pare down the list (somewhat more helpful, but still just a list), a "Facebook Phonebook" to reach out to your extended social circle, and the much more useful folder of "Starred contacts," which is still a list, but a very selective one at that.

The call experience will vary from phone to phone based on the hardware you're holding, but those are the basics of making calls and managing contacts on a modern Android phone. Now let's get to the fun stuff you *really* bought your phone for.

Browsing the Web

Your Android phone can do all kinds of neat things with its almost ubiquitous access to the web, and browsing the web is one of its core abilities. Here's how to make the most of your browser—the app labeled, helpfully, "Browser."

Navigating with the Browser

A quick bit of history and perspective on your Android browser. It's built with [WebKit](#), a web browser backend originally built for KDE, a desktop version of the (very geeky) Linux operating system. Apple, the maker of Mac, iPods, and iPhones, picked up the project and used it as the base for its Safari browser and all of the Mac's web abilities. WebKit has since been adopted by many software projects, including Google's Chrome browser and, yes, the browser on your Android phone. The Android Browser is not, however, Chrome for Android. It can render full web pages that look as they do on a desktop computer 99% of the time, and, with the 2.2 Android update, the Browser can even render sites that require Adobe Flash, putting it ahead of the pack in that regard. There's no built-in bookmark syncing or importing in Android Browser, but that's (hopefully) coming soon. A growing number of web sites are automatically detecting Android browsers and formatting their pages in ways that are friendly to smaller screens, and some are using the same formatting they prepared for iPhones, with varying success. In other words, the Browser (as we'll call it from here on out) is good at what it does, and should get more convenient in the near future.

Launching the Browser

There are two main ways to open up your Browser and get to a web site. The first and most obvious is to launch the Browser app. The newest Android phones have a Browser button that's always at the bottom of the home screen, to the right of the app tray. Any Android phone can launch the Browser from an icon on their home screen, or in the app tray.

The other way—the way I prefer, on my no-keyboard phone, at least—is to hit the Search button from the home screen. From the toolbar that drops down, you can type in a standard web address—completeandroidguide.com, as a totally random example—and the Browser will launch and head right there. You can also perform Google searches from this bar by simply typing in your query—"The complete guide to google android," perhaps. Either way you launch it, your Browser pulls up, and if you weren't searching for something specific, you'll see a customized Android home page.

 <http://www.google.com/...> 

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Google



 Buffalo [Near me now](#)

 @gmail.com [Sign out](#)

[iGoogle](#) [Settings](#) [Help](#)

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Android Browser Home Page

As you'd expect from a browser, the links to other sites are rendered with underlined, colored links on standard web pages. The Google

home page will try and get a general location fix from your GPS sensor, nearby Wi-Fi spots, or very rough triangulation from cellular towers, unless you've turned those features off in your phone settings. With that location fix, you can click the "Near me now" link to see restaurants, banks, or other points of interest nearby, and your searches will return local results near the top. Neat.

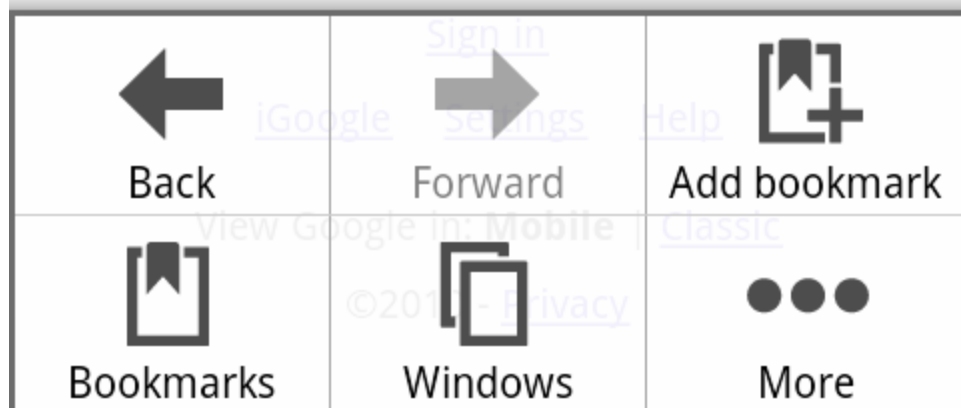
Your browser might not look exactly like the standard Android version, but it's probably pretty close. HTC's browser just moves some of the Menu buttons around, for example, and changes the shortcut name from "Browser" to "Internet."



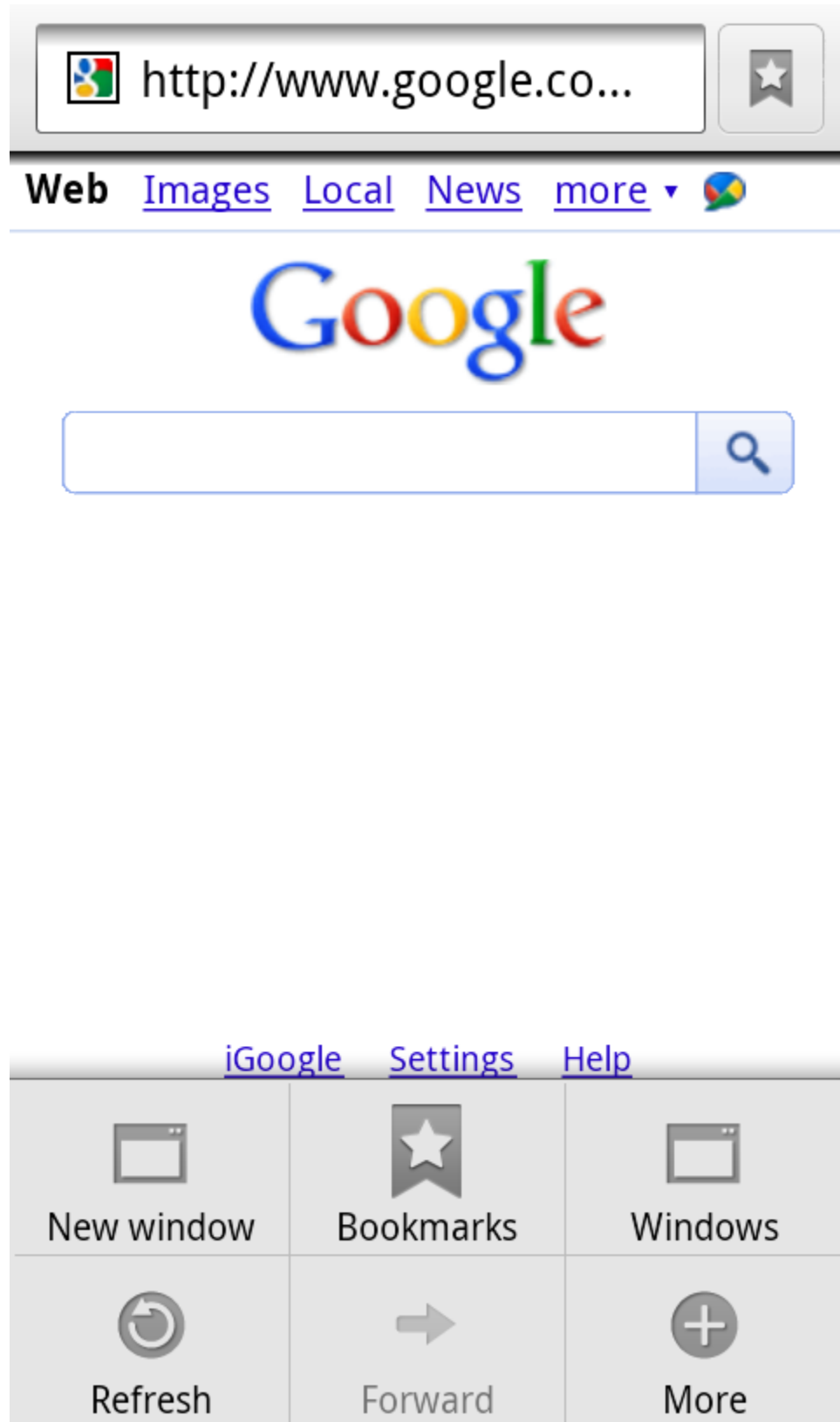
Google

● Location unavailable [update](#)



Same with Motorola's tweaks to the Droid X browser:

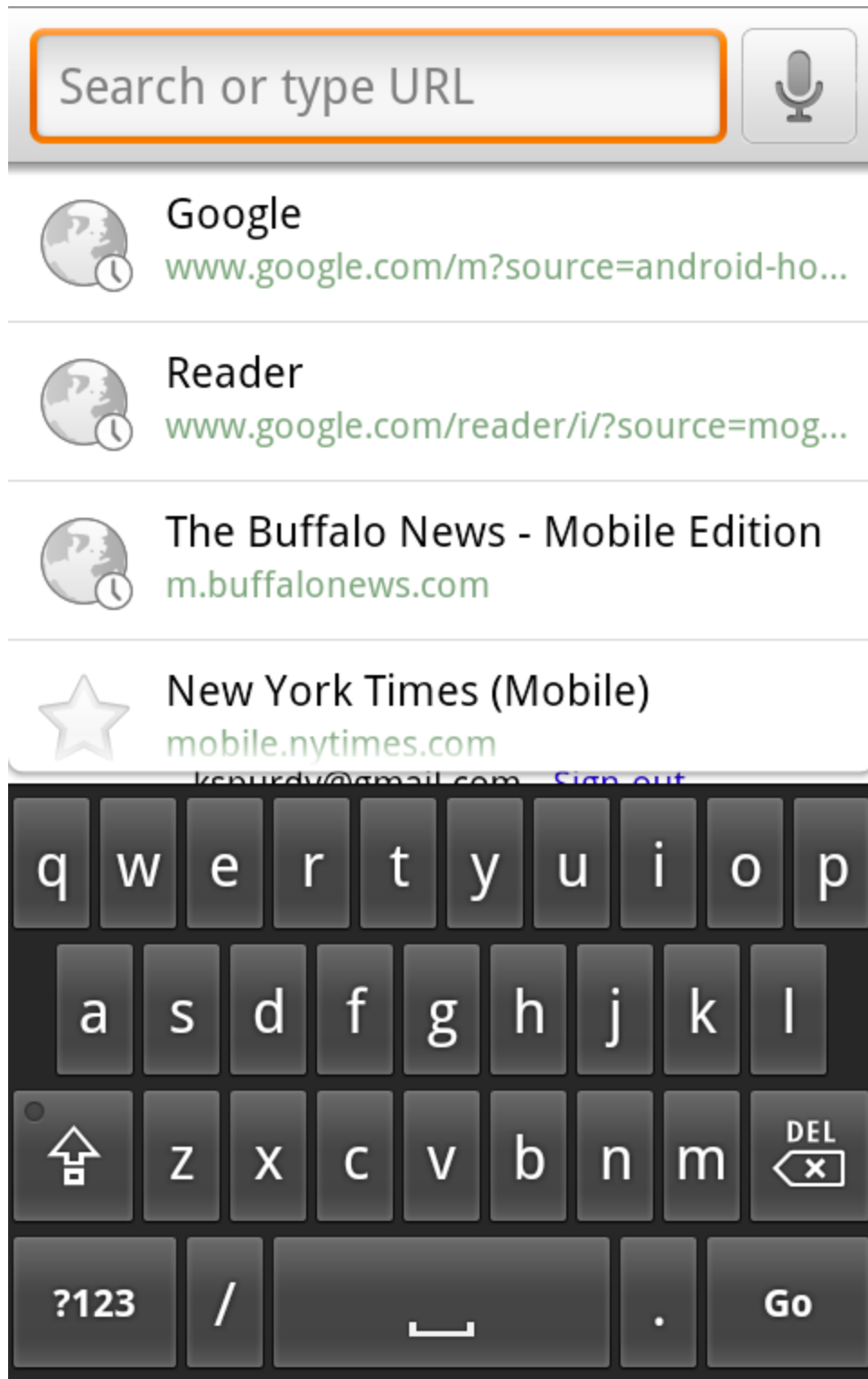


HTC Internet Browser

Other than those cosmetic differences, any Android browser should work very similar to how the standard browser is described below.

Navigating to Locations

To move beyond the Google home page, look up at the toolbar near the top of your Browser window, then tap it.



Web Browsing Tool Bar

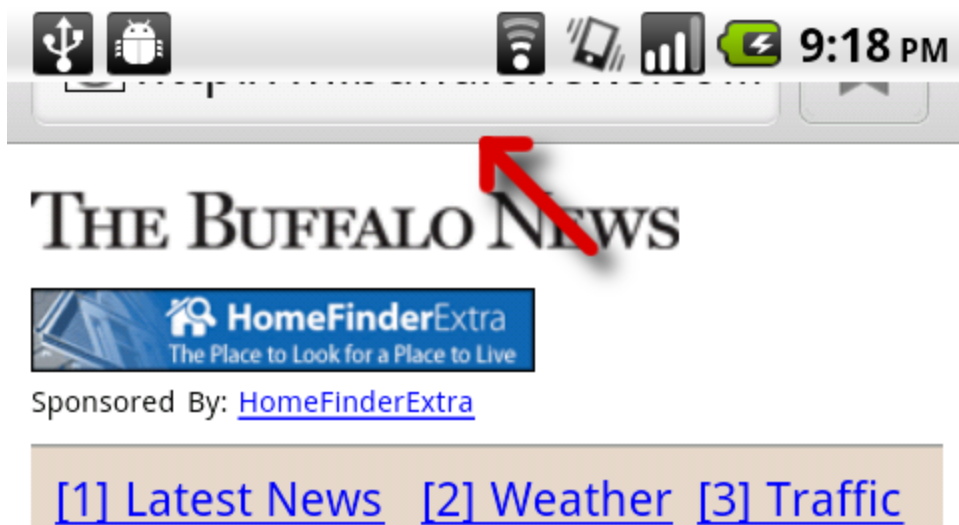
You'll see your most-visited URLs and bookmarks listed below the address box, and they'll change up to match your letters as you start

typing in a new destination. The microphone icon to the right of the URL bar activates voice input, where you can speak your search queries, but not direct addresses. If you simply say "Yahoo.com," for example, you'll search Google for that query—which is kind of convenient, because it's the first result, but not quite as time-saving.

Want to head back to the page you were just on? Use your phone's physical Back button, or hit the Menu key and choose Back, or Forward if you want to go—yeah, you guessed it. Hold down the Back button to see a list of your recent web wanderings, and click any of them to jump in.

While you're navigating, you can also use your phone's Search button to bring down the URL bar, which acts just as it does from the home screen. Type in an address or write out a Google search, and you'll access it when you hit Go.

As you scroll down the page you're browsing with your thumb or the trackball, you'll see the URL bar scroll up and eventually disappear:



Disappearing URL Bar.

No need to worry, though—scroll back up, or hit your Menu button, and the URL bar reappears.

Zooming, Pinching, and Making Tiny Text Read-Able

Some tech-savvy sites have already formatted their web pages to detect Android browsers and offer up a special version of their pages that have bigger type and fewer columns, in order to be more friendly to small phone screens. Most sites, however, treat Android's browser like any other browser, and present a full page when you visit.

For example, here's the *Washington Post*, visited from an Android browser in June, 2010:



http://mobile.washingto...



The Washington Post

Jun 19 | [Washington](#) 78° Mostly Cloudy

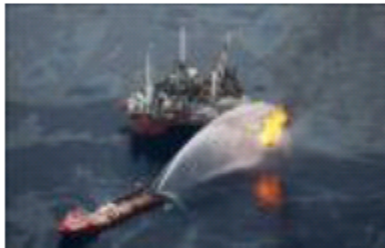


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The Washington Post



Top Stories



Oil well partner attacks BP as 'reckless'

BP's three-front oil spill war -- on the seafloor, on the Gulf Coast and in Congress -- turned into a four-front battle Friday when its main partner in the damaged exploration well blamed the oil giant's "reckless decisions and actions" for causing a disaster that was "preventable."



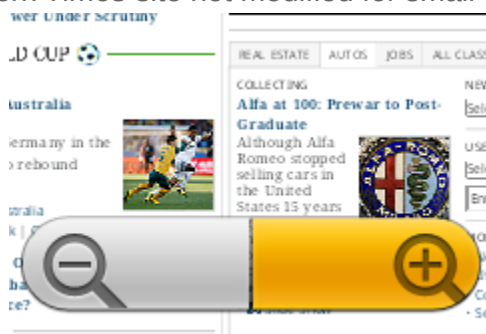
New turn in Afghan, Pakistani relations

Washington Post Mobile Version from the Android Browser

Large type, cleanly laid out, and all in a single column to scroll through with your thumb. Head to the *New York Times*' main page on the same day, and you get this:



New York Times site not modified for small screens



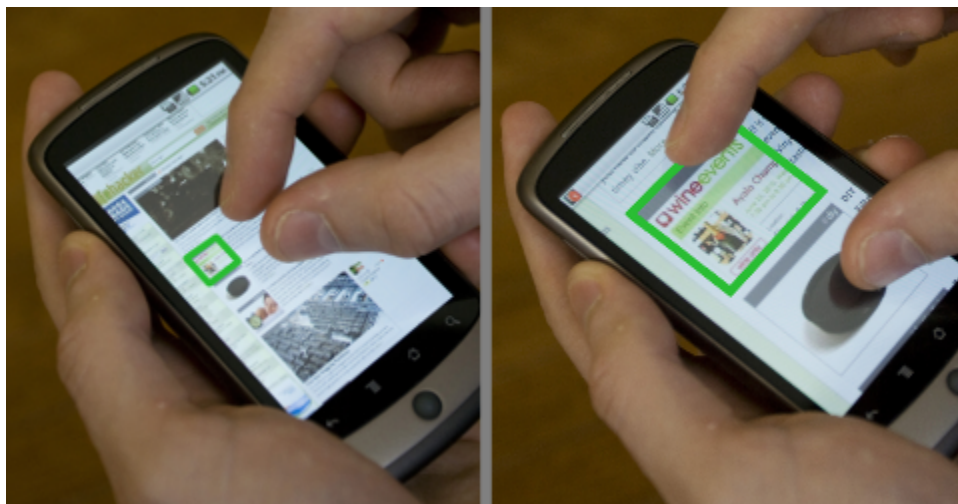
Zoom with the Magnify Button

You can mostly read the headlines and get an idea of the pictures, but, man, that's tiny type. Android offers two solutions for dealing with this. On every phone, there are two magnifying buttons that appear in the lower-right corner as soon as you move the page a teensy bit with your thumb. They increase the size of everything on

the page—text, pictures, borders, the whole deal. As you zoom in, the browser will shift things around and try to adjust the columns of text so they neatly fit the margins of your screen, usually with some success.

It should be noted here that many popular news and entertainment pages that don't offer a specific Android-friendly version of their page will have a standard "mobile" site you can get to, either from a link on the front page ("Try our mobile version"), or by heading to a slightly different address. Opening m.nytimes.com or mobile.nytimes.com brings up a universally smaller-scale Times, and the same URL change works for most sites, too. If not, try something akin to nytimes.com/m.


On newer Android models, Android has adopted the same finger controls that Apple pioneered with its iPhone. To zoom in on a particular focus point on the page, place two fingers over the point, then spread them apart from that point. Note the green box in the thick-fingered illustration here—it's the same picture outlined in green in both slides, but in the right-side example, I've pulled my fingers apart.



Zooming in on a particular focus point.

Think of it like operating a camera lens that focuses as you twist or raise it, or having a thin layer of Silly Putty over your screen that stretches the text as you stretch it—with better results, obviously, than you probably remember from your childhood newspaper blotting. To zoom back out again, place two fingers in separate spots on the screen, then bring them together in a "pinch," the opposite of the zoom motion.

More useful for reading is the specific column sizing you can do with your fingers for pages with a good deal of text. Click on an article headline at the *New York Times*, and you'll arrive at an article that's formatted for a standard browser:




Ruby Washington/The New York Times

The Web warned Victoria Shtainer against a prospective tenant.

By HILARY STOUT
Published: June 17, 2010

IN an age when people reflexively turn to the Web to screen everyone from blind dates to baby-sitters, the Internet search has become a part of one of the most opaque and arcane screening processes of all: the New York co-op board review.

[Enlarge This Image](#)



George Ruhe for The New York Times

It is by no means a universal practice. Many co-ops, and the management companies that oversee them, say they do not routinely use the Web to dig for dirt on prospective buyers. They say the standard co-op application package — tax returns, bank statements, salary

[FACEBOOK](#)
[SIGN IN TO E-MAIL](#)
[PRINT](#)
[SINGLE PAGE](#)
[REPRINTS](#)
[SHARE](#)

CONVICTION
Watch The Trailer

Article Formatted For a Standard Browser. A little hard on the eyes.

It's decent, but if you're going to actually read all that text, you'll want to go easier on your eyes. Tap twice anywhere inside the main text column, or on an image, and the browser will reformat the column margins and word flow to better fit that text or picture.



11:56 AM



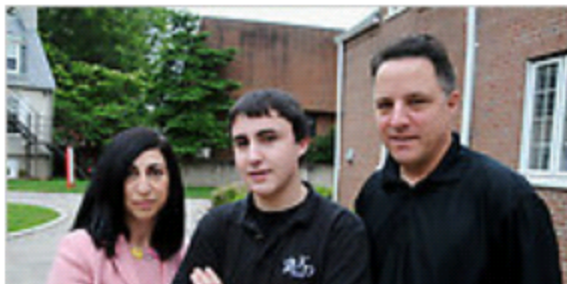
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[Enlarge This Image](#)



It is by no means a universal practice. Many co-

Reformatted view after a double tap of the text you want to read.

Better. But let's say you want really big text, or text of a very specific size, so that the pictures don't smoosh the words to any side and you feel like your phone is simply a portal to a page of text. Go ahead and use those two-finger spread and pinch motions to get the text exactly the size you want it, then double-tap it again again with your finger. You could also use the magnifying buttons that continue to appear in the lower-right, but your fingers give you more fine control.



12:02 PM



George Ruhe for The New

Shari Bornstein and Bryan Meccariello's son, Garrett, was revealed by Facebook to be a plus.

It is by no means
a universal
practice. Many co-
ops, and the
manager

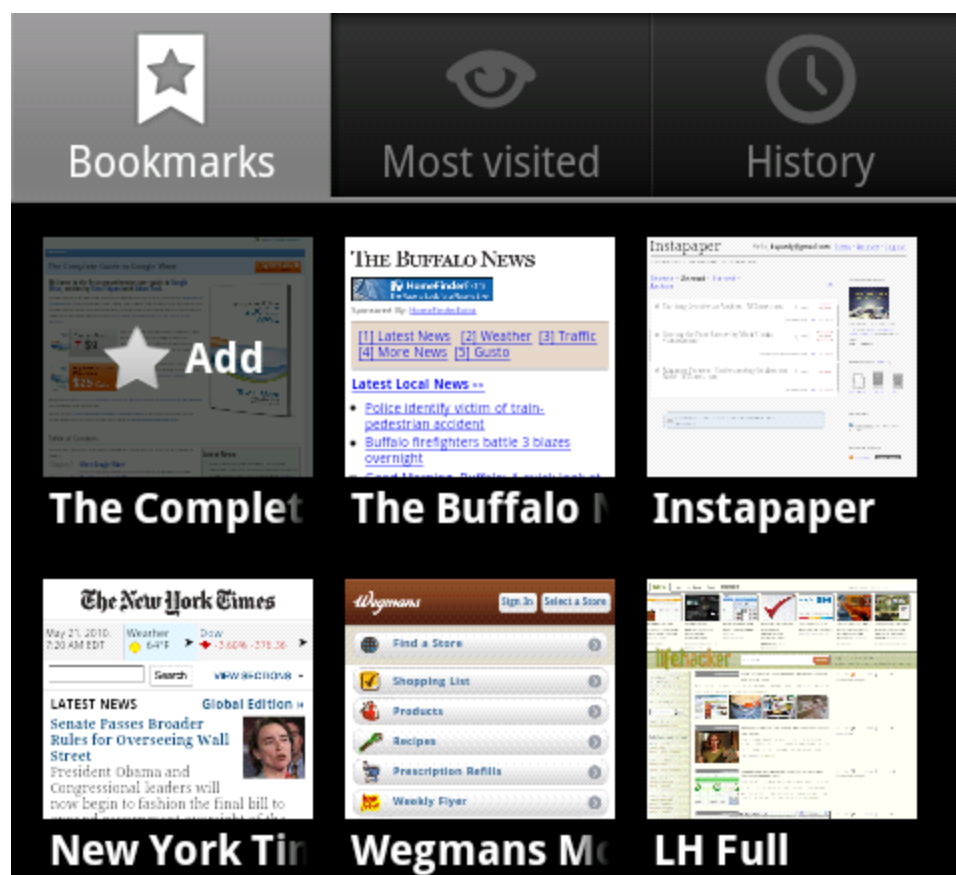


Further Zoom of the text

And there you have it—the perfect view for those Sunday mornings where you don't want to get out of bed, so you reach for your phone, dial up the news, and read it right there, because you're too cheap to shell out for the paper and too lazy to get up just yet and feed the cats. Or so I've heard.

Bookmarks

Back to the browser and all its buttons. What's that ribbon-with-a-star icon to the right of the URL bar? That's the Bookmarks icon, also reachable from the Menu button. Go ahead and click it.

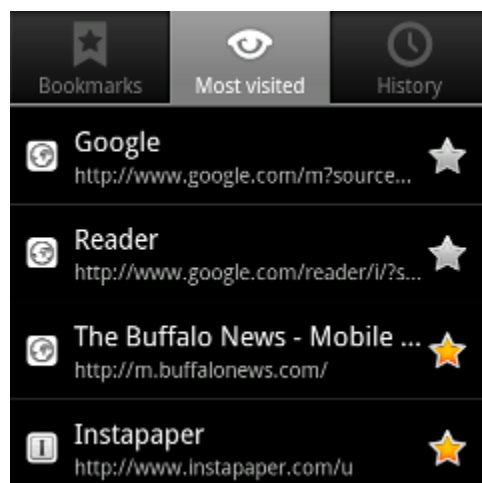


Bookmarks Tab

Your main Bookmarks tab is where you'll see, well, your bookmarks. On a just-out-of-the-box phone, you'll probably have a host of pre-loaded bookmarks for popular sites and services—the *New York*

Times, ESPN, and the like. If you've got a whole lot of bookmarks, it might be convenient to hit the Menu button and choose List View for a text-only scroll. Keep your pre-loaded bookmarks if you'd like, or press and hold on a bookmark to pull out the menu so you can delete it. Note that pressing and holding on a bookmark also lets you edit its name and address, add it as a direct shortcut to your home screen, and copy or "Share" a bookmark.

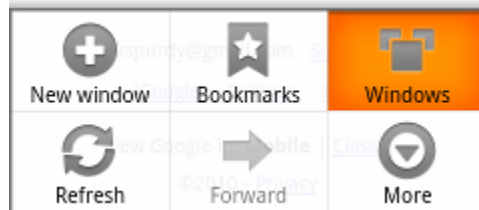
Want to change your home page? This is where you do it, by pressing and holding a bookmark and choosing that option. Want to add a bookmark? Navigate to the page you'd like to add, press the Bookmarks button, then choose the top-left box with the star, and "Add" text.



Hit the Stars on the Right to Create Bookmarks

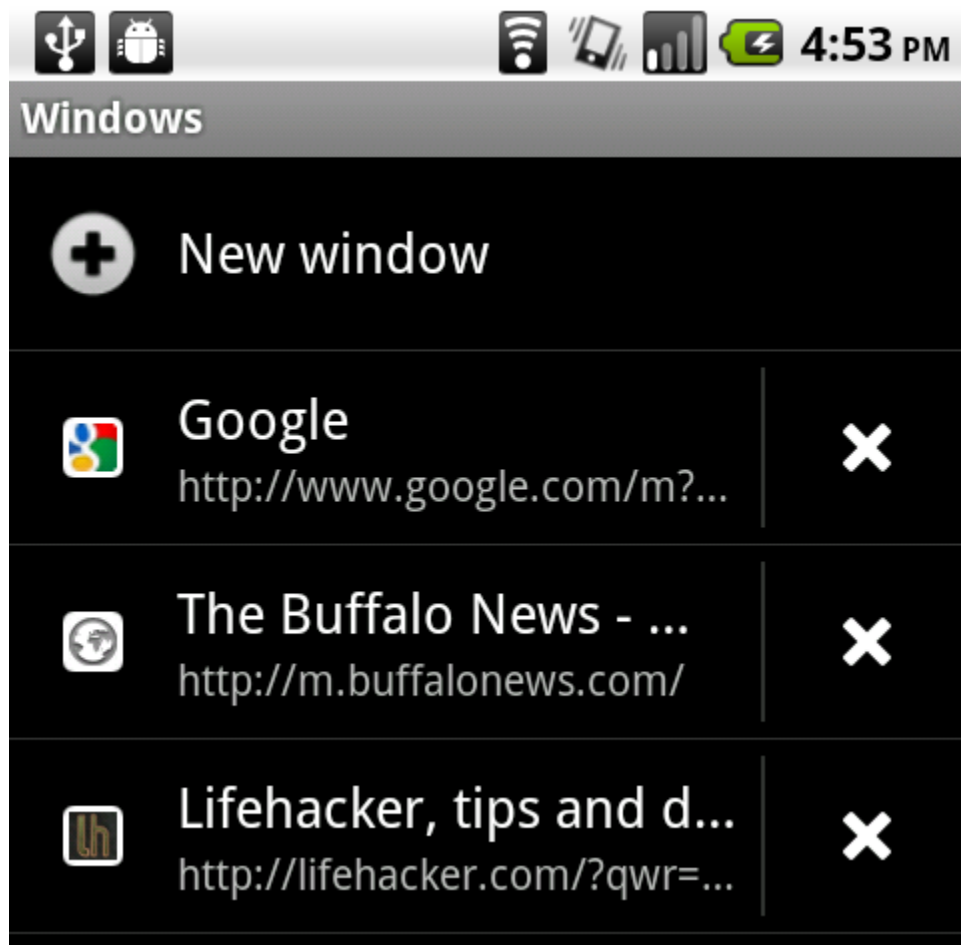
Your other two tabs, Most Viewed and History, work in the same basic way as your bookmarks, and the press-and-hold commands are the same. The main difference is that your recent and most-visited pages aren't yet bookmarks, but you can make them bookmarks by clicking the star icon to the right of each.

Managing Multiple Windows



Hit "New Window" in the Browser Menu

Back in the main Browser window, hit the Menu key to pull up your options. On the top left and right sides, there are "New Window" and "Windows" buttons, respectively. Hit "Windows" to see how your browser handles multiple web pages.

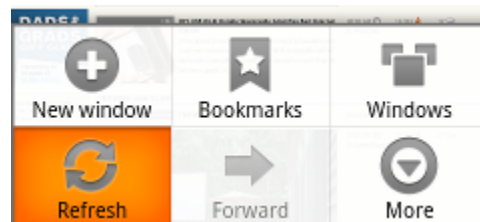


Moving an app icon

If you're looking at a web page and want to open a new page while keeping the page you're looking at open, hit Menu and choose the

"New Window." Your new window will open to the home page you picked out, and you can then browse to whatever you want to look at. It's also worth noting that certain web pages design their links to automatically open in a new window, so you may accumulate a few different open windows while you browse around. From the Windows page, you can close open windows with the "X" button next to each, switch to one of your open windows, or open a new windows. It's not a bad idea to occasionally clean out your browser windows if you haven't done so in a while, but neglected windows also cache themselves in a way that requires little memory, so it shouldn't be strictly necessary.

Refreshing and Stopping



Browser Refresh Button

In the lower-left corner of your Menu button offerings, you'll usually see a Refresh button, which, as you might imagine, reloads the page you're looking at. If you pull up your Menu while a particularly slow-loading page is grinding away, though, it becomes a Stop button, which kills the strain on your data connection and processor, and then immediately turns back into a Refresh button.

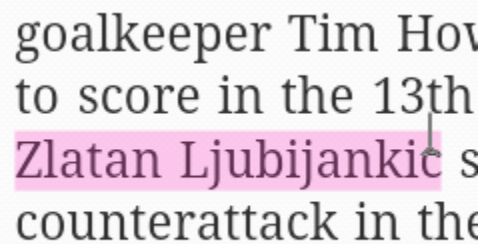
Searching For and Selecting Text

Android is full of "More" menus that seem to hide really cool stuff, and the Browser is no exception. There are three main tools you'll only find in the More menu for selecting text, finding text on a page, and "sharing" a page though many of your installed apps.

Selecting Text

Need to copy an address or other bit of text from a web page, so you can paste it later into an email or a web search? Here's how to pull it off.

On the page that's got the text you want, hit your Menu key, select More, then pick "Select text." It seems like nothing has happened, but if you move the trackball around, you'll notice that there's now a computer style cursor to move around.



goalkeeper Tim Hov
to score in the 13th
Zlatan Ljubijankić's
counterattack in the

Selecting Text

Once you've spotted it, move it to the beginning of where you'd like to start selecting text. Now click down on the trackball. Next, move the cursor to the end of the text you're selecting, so that the text you want is highlighted. Click the trackball again, and your text is copied to the phone's clipboard—the equivalent of performing a "copy" maneuver on a standard computer. Note that you can actually select the text you want to copy with your finger, too, but, at the moment, it requires a frustrating level of accuracy, and you're usually better off using the trackball, as wonky and old-school as it may feel.

Zlatan Ljubijankic



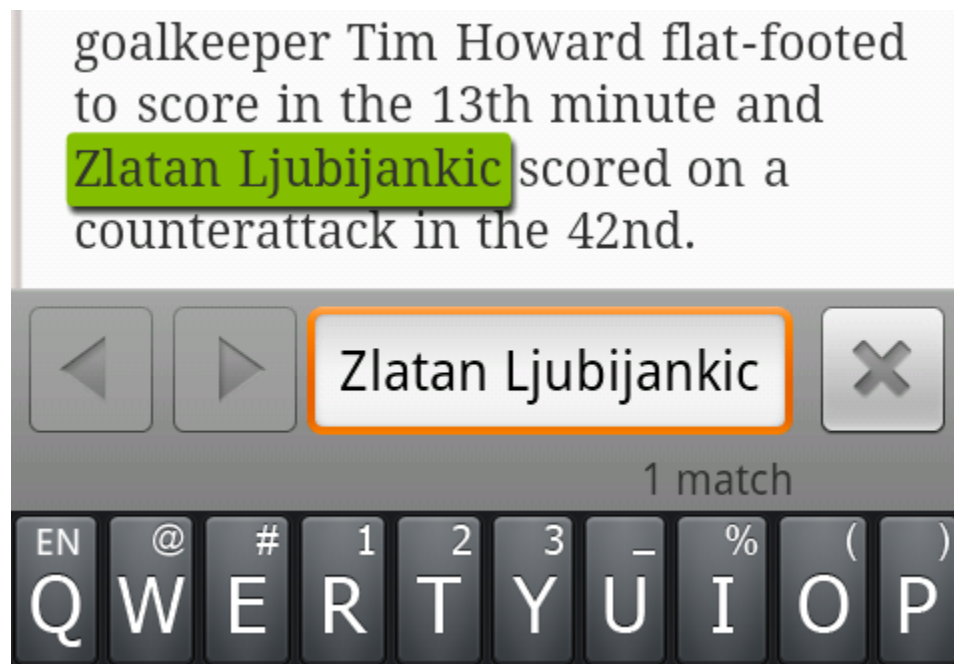
Zlatan Ljubijan
Search the web

Placing Selected Text in the Search Box

With that copied text, you can press your finger and hold it on any text area on your phone, then select "Paste" from the menu that pops up to drop your text in. Web searches, emails, Facebook, or Twitter updates—anywhere you want.

Finding Text

This one's fairly simple. Hit Menu, choose More, then select "Find on page."

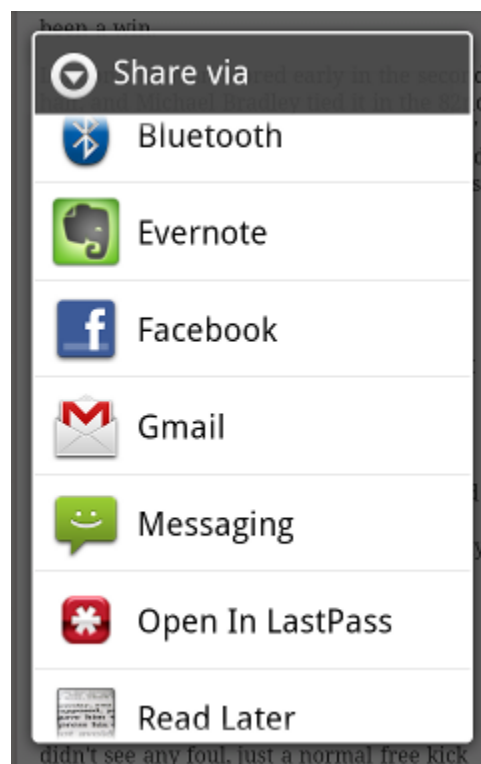


Finding Text

Enter the text you want to pin down in the search box, and the browser will automatically find the first match as you type, and provide forward and back arrows for multiple matches. This is another smart place to use the select-copy-paste text method, described in the section above, for doing a little light research or location scouting from your phone.

Share Page

It sounds like just another way to bug your friends—email them about this page you found. Yeah, sure, you can do that—but "Share" means a lot more on an Android phone.



Share Menu

On my phone, for example, my Share menu in the browser, and other places, has a few interesting options. I can "share" pages and files through a Bluetooth connection to a computer or other device. In practice, that means I can wirelessly transfer the odd file or two to

my laptop when I don't have a transfer cord handy. [Evernote](#) is a nifty kind of web-based memory system where you can upload links, pictures, audio notes, and text snippets, and then tag them all so they're easy to pull up later (it's how I gather gift ideas). You can guess how Gmail, Facebook, and Messaging work. "Open in LastPass" is a result of signing up for and installing an app from [LastPass](#), a nifty password service that's very secure and accessible from anywhere. "Read Later" is a great, free application that does one clever thing—installs this "Read Later" option in the browser's Share menu, so that articles are sent to the [Instapaper](#) web service. Instapaper then strips down the page to just the text and primary pictures, and keeps them all stashed online for whenever I want to read them (hence "Read Later.")

Browser Settings



Browser Settings Menu

There are many, many settings you can fiddle with to change how your browser displays things, saves data, and operates. Here's the run-down, as of Android 2.2:

- **Text size:** Pick any of the six options between "Tiny" and "Huge." "Normal" should be fine for most people. Not the same as the page zoom, mind you.
- **Default zoom:** When you double-tap on a picture, this is how close Android zooms in by default. "Medium" should be fine, but those who like to get big text when they tap should move up to "Close."
- **Open pages in overview:** If you'd prefer Android to remember just how far you usually zoom in on pages, un-check this. Your pages will open up zoomed in a bit, so they're easier to read.
- **Text encoding:** Change only if you have problems displaying text on foreign language pages.

- **Block pop-up windows:** Just what it sounds like. Android's pretty smart about allowing pages to bring up windows related to site function—log-in boxes and the like—while keeping advertisements blocked, so it should generally stay checked.
- **Load images:** Do you have a very bad data connection at most times, or just don't see the point in loading images on mobile pages? Jump back in time by un-checking this option.
- **Auto-fit pages:** When you zoom in or out, Android will tweak the layout in little ways, changing box and border sizes and re-distributing certain elements. Some forums and other specialty web pages don't look right with this tinkering, so turn this off if you're experiencing similarly bad-looking pages.
- **Landscape-only display:** The browser automatically rotates between portrait (vertical) and landscape (horizontal) orientation by default. If you'd like to keep your browser in landscape mode for more horizontal room, check this option.
- **Enable JavaScript:** Turn it off if you really, desperately want to see only speedy pages of mostly text, but know that most modern web pages are going to have some issues with your choice.
- **Enable plug-ins:** Android 2.2 and later supports content plug-ins, like Adobe's Flash. There is "Always on" and "Off," but the smartest setting is "On demand," so you can choose when Flash should run on the browser, clicking the little green downward-facing arrows to load Flash on certain pages, but keeping it off to avoid pop-out animated ads and the like.
- **Open in background:** If you tend to open a bunch of links from a page, then check this. You can click all the links you like on a page, then check them out individually by hitting Menu and opening the Windows dialog.
- **Set home page:** The default Android home page is a customized Google search box. You can enter the URL of another page to start on here, but it's easier to head to that page first, then head to this setting, where a "Use current page" button will save you a good deal of typing.

- **Clear cache:** All the data your browser is storing to make heading to the same pages repeatedly a bit faster. Clear this when certain pages are having trouble loading something like a search result or new content, when you know they should look different.
- **Clear history:** Just like it sounds. Helpful if you keep getting an annoying result you don't want while typing into the address bar—or if you don't want others to see items you've browsed in your history. Remember that you can clear individual items from your history list by heading to the Bookmarks menu, then the History tab.
- **Accept cookies:** Most cookies, or bits of information about your visit and your individual site preferences, are harmless. If you don't trust the web as much as the masses, or just need to avoid certain cookies from certain sites, un-check this.
- **Clear all cookie data:** Wipes out the cookies you've already collected. May be helpful in logging out of every site at once, if you have to hand over your phone to a friend.
- **Remember form data:** The browser can remember your input into boxes that call for ZIP codes, search terms, or other information. The next time you visit them and click inside to type, the browser will drop down some of your recent entries to pick from, if you have this enabled.
- **Clear form data:** Wipes out all the text and site searches you've entered, and which the browser has saved.
- **Enable location:** This allows sites that want to use your current location to cater their services to you do so, using either GPS (very accurate) or nearby Wi-Fi spots (somewhat accurate). Even with this checked and enabled, you'll still have to approve sites on an individual basis to allow location access.
- **Clear location access:** Wipes out the sites you've approved for location access, so that they'll have to ask again for permission to locate you.
- **Remember passwords:** Enable this, and the browser will usually ask you to remember your passwords when you type

into what looks like username/password fields. You'll get "Remember," "Not now," and "Never" options on each site.

- **Clear passwords:** Wipes out every password your phone has saved from the web. Note that this option doesn't wipe out the main Google Account password that lets you access your Gmail and other Google services.
- **Show security warnings:** If a site has a security or encryption certificate that remains unsigned, doesn't match up with its vendor, or otherwise seems to have something amiss, the browser will let you know and ask if you want to continue. Some of us have to deal with sites we need to use that just aren't on their security game—your author included—so un-check this if that's the case, but keep it checked at most times.
- **Web site settings:** Generally, these individual sites are Google-related, and the settings relate to their access to your location. Click if you want to deny access to one site location but keep the others' settings together.
- **Reset to default:** Something's started going wrong since the last time you tweaked your settings? Unsure what you've changed and want it changed back? Hit this button and confirm the switch, and you'll get your browser back to exactly how you got it when you first turned on your phone.

Phew. That's the long and short of browsing on an Android device. The browser is one of the core elements of an Android phone, as you'll see as we move on. Note, too, that this is an overview of the main browser on an Android phone, but there are many others you can use that work in a similar way with different features—or completely different, in some cases. To see a few recommended options, head to the chapter on **App Alternatives**.

Gmail & Email

If there's a single case to be made for picking an Android phone over an iPhone, it's Android's tight, nearly seamless integration with Gmail. Managing your Gmail account on your Android phone is more intuitive than on other mobile clients, because the functions you expect from Gmail—archiving, deep search, threaded conversation views, and labels—are available right inside the Gmail app.

If you want the full Android email experience, you should start switching your web mail account over to Gmail—and we'll explain how to do that here. You can still receive your Hotmail, Yahoo!, and AOL messages in your Gmail inbox, and reply with a Gmail address that, eventually, your contact list will come around to. Got a personal site, small business, or other organization account that runs on Google Apps? You're good to go on Gmail as well.

If you'd rather keep receiving *and sending* email through your non-Gmail account, or have a corporate account that requires Microsoft Exchange, you're likely still covered through Google's not-quite-as-awesome Email app—more on that in a bit. In the meantime, let's dig into how Gmail works on an Android phone.

In other words:

- If you have a **Gmail or Google Apps account**, or are interested in **switching to Gmail**, read up on "**Managing Your Accounts**" and "**Using the Gmail App**."
- If you have a **non-Gmail/Google Apps account you're keeping**, or a **Microsoft Exchange account** through work, **skip to "Using the Email App."**

If you're rocking an HTC or Motorola phone, you might notice the non-Gmail email app has seen a few

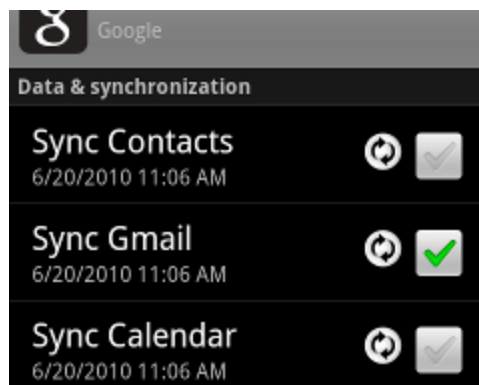
changes on your phone. We'll cover those specific changes toward the end of the chapter. The Gmail app, and the basic setup of the non-Google Email app, remain the same.

Setting Up Your Accounts

By default, the Google Account you signed in with, or created, when activating your phone is loaded up on Gmail and the password is saved permanently. Before you start messing with your other accounts, though, let's load in whatever else you need to check and send mail from.

Google Apps Accounts

If your school, business, or personal site has set up their email to be managed through [Google Apps](#), well, you have it pretty easy.



Setting up another Google Apps account

From your phone's home screen, hit the Menu key, choose Settings, then select "Accounts & sync." Click the "Add account" button at the bottom of this screen, then select "Google" from the choices. You'll get a familiar prompt to either create or sign into a Google account.

Choose "Sign in," then type in your username and password for your domain account—"kevin@besttechbookeverwritten.com" and "itsasupersecretphrase," for example. You'll then have to choose which aspects of that Google account to sync to your phone—we're only dealing with Gmail here, but go ahead and sync the others, if you'd like. Note that your Google Apps email messages won't be filtered into your main Gmail inbox by default—you'd have to set it up in your main Gmail account's web settings to do so. You'll just simply switch between the two accounts, using either a button in the upper-right or a Menu option, which we'll explore in a bit.

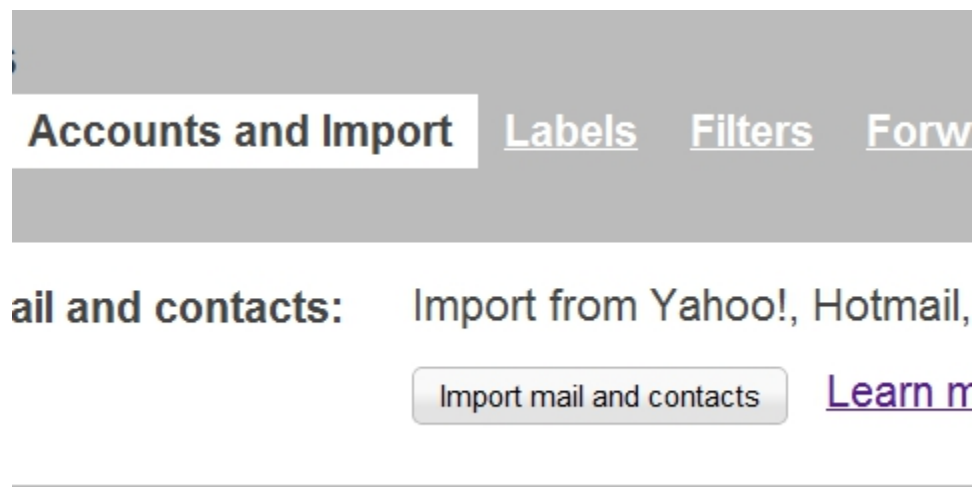
Migrating to Gmail from Non-Google Accounts (Yahoo!, Hotmail, AOL, Comcast, RoadRunner, etc.)

The smartest way to use your Android phone with your primary email address is to make that email address work through Gmail. That sounds like a nerdy pain in the butt, but it's actually quite easy. On a desktop or laptop computer, head to Gmail.com, and sign in using the same Google username and password you gave when setting up your phone. If you've never used Gmail before, you may need to set up your account, but it's a fairly short process.

Note: You can, technically, pull this process off from your phone, by logging into Gmail.com from your browser, choosing the tiny "Desktop" link at the very bottom-right of the mobile Gmail page, then heading into Settings—but the process will be slightly different, and it's something of a pain to get through. If you're going to attempt it, an older Lifehacker write-up from Gina Trapani, "[Consolidate multiple email addresses](#)"

[with Gmail](#)," walks through the process using the older Gmail version you'll encounter on your phone.

Once you arrive at your inbox screen, look in the upper-right corner for a "Settings" link, and click it. Near the top of the main box there, find and click the "Accounts and Import" link. From there, click the "Import mail and contacts."



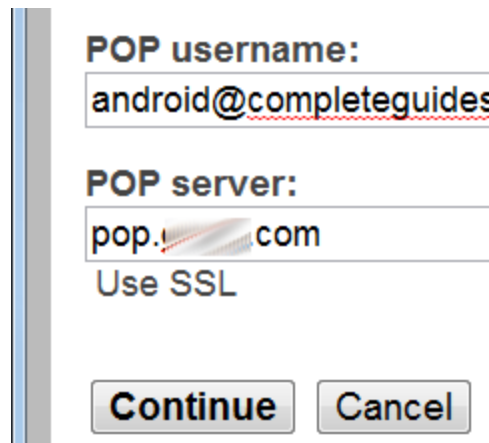
"Accounts and Import" Tab in Email Settings

In my own case, I've got an email address set up for this book, android@completeguides.net that I'd like to use through the Gmail app on my phone. Gmail first pops out a box asking for your email address, so I'll provide it. If you're bringing in a Hotmail, Yahoo!, or other web mail account, go ahead and enter your regular email address.

Next, Gmail will ask for the password associated with that account, and assures you that it will delete that password once it's done importing your first batch of mail—then you can choose whether to keep having mail forwarded through Gmail.

For most web mail, cable, and other accounts, simply entering a username and password will move things along—Gmail knows how to connect to a wide variety of email servers. If Gmail comes back

and asks for more server information, you may need to head to your web mail's settings and enable "POP" mail fetching, ask your email or internet provider for the incoming and outgoing mail settings, or do a little Google-ing for something like "verizon.net DSL pop settings," and coming up with something like [RLWD Web Resources' helpful compendium](#).



POP username:
android@completeguides

POP server:
pop.completeguides.com

☐ Use SSL

Continue **Cancel**

Setting up your Outside Account

In my own case, I had to log into my web provider, get the POP settings for my domain, and fix up Google's best guess at them. After hitting "Continue," you'll be asked some semi-final questions on setting up this account:

Step 2: Import options

Select the import options for **android@completeguides.i**

- ☒ Import mail
- ☐ Leave a copy of retrieved message on the server
- ☐ Archive incoming messages (Skip the Inbox)
- ☒ Add label to all imported mail:

Start import

Cancel

Import Options

"Import mail" makes sense to leave checked, no? If you plan to keep using your email address through its own site, or another app like Windows Mail, Apple Mail, Outlook Express, or the like, click the box next to "Leave a copy of retrieved messages on the server."

"Archive incoming messages" and "Add label to all imported mail" are primarily for Gmail users who are combining multiple accounts—enabling these options means their imported mail doesn't arrive in their main inbox right away, but shows up instead in the sidebar with a special label. But if you're, say, a Hotmail or Comcast user who's setting up this account mainly to make it available on your Android device, you'll want to un-check them, so that your Gmail inbox is just another copy of your primary inbox.

Hit "Start import," and watch as the mail rolls in (hopefully—Gmail warns it can take up to 48 hours for accounts with lots of messages to come in). While that's running, jump into your Gmail Settings again, head to Accounts and Import, and look in the "Send mail as" section. Your Gmail address will likely be the only account listed, but you want to send mail using your main account that everyone recognizes, right? Click the button for "Send mail from another address."

Step 2: Import options

Select the import options for **android@completeguides.i**

- ☒ Import mail
- ☐ Leave a copy of retrieved message on the server
- ☐ Archive incoming messages (Skip the Inbox)
- ☒ Add label to all imported mail:

Start import

Cancel

Choosing your Email Identity

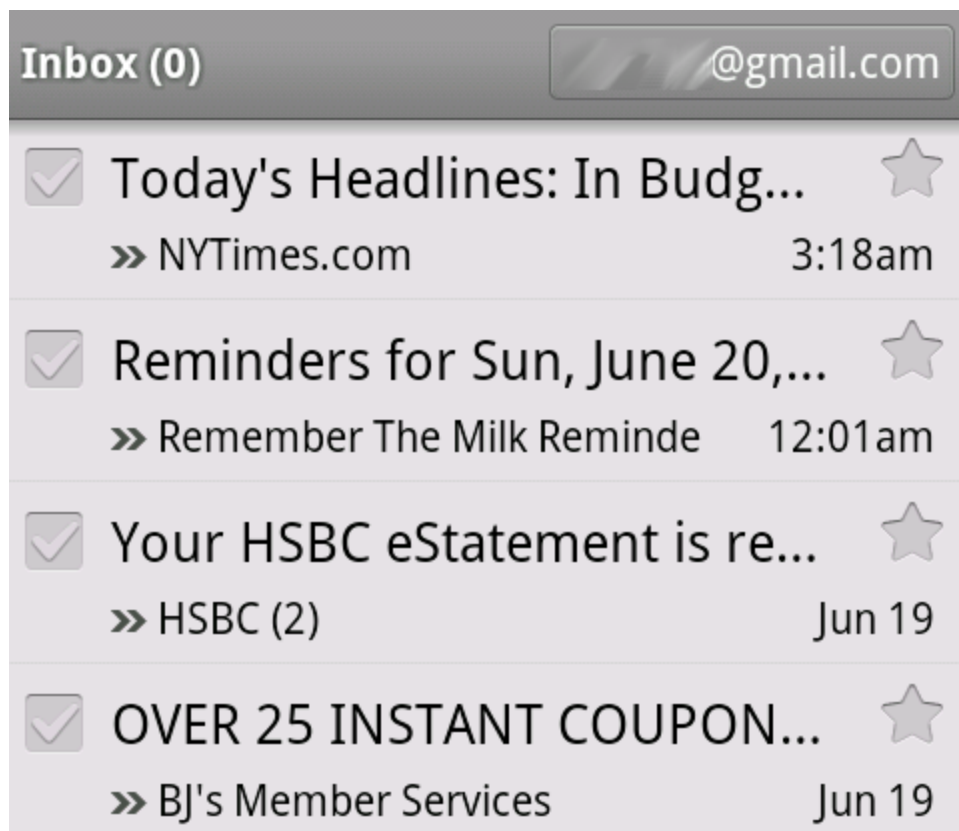
Run through the steps the same way you filled out the import section. Provide a name and email address that people will see. In the second screen, you'll be asked whether you want to "Send through Gmail," or "Send through (your domain's) SMTP servers." In most cases, choosing "Send through Gmail" is just fine—Gmail handles all the technical details, and unless your recipients work as network engineers, they won't ever know the difference—you're still SuperAwesomeTiger435@aol.com (or something, possibly, more adult).

The final step is Gmail noting that it's going to send a verification email, with a code inside, to the address that you've set up as your own, that you'll be sending mail through, to prove it's really yours. If your Gmail importing is taking some time, you can head back to your main email app and grab the code there, or wait for it to filter back to your Gmail inbox.

Get the code, enter it, click "Verify," and you're done—Gmail is now, essentially, a clone of your email service. Skip to the "Using Gmail on Android" section.

Have a Microsoft Exchange account? Scroll down to the section on setting up the Email app, where you can load in all your server details and start syncing your company mail.

Using the Gmail App



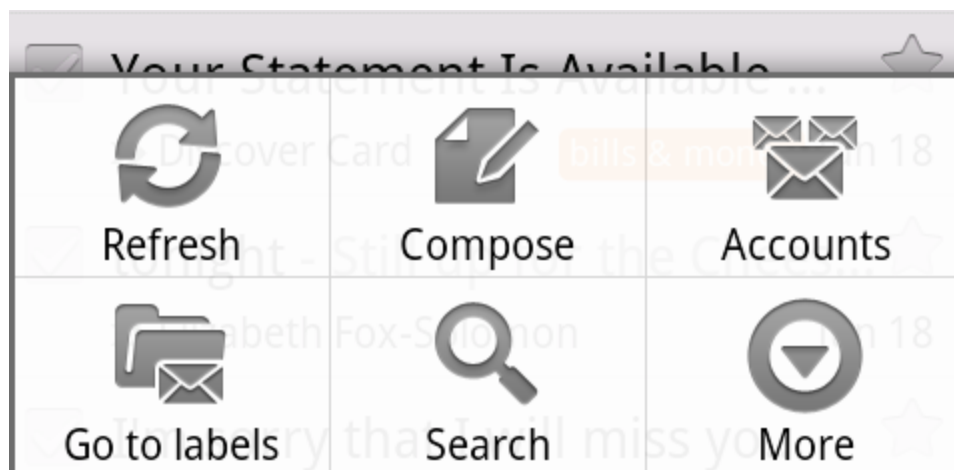
Gmail Inbox

Click the Gmail app icon from your home screen or app tray, and you'll arrive at the inbox. You see a list of messages, a preview of their subjects on the top line, and the sender on the second line. There are check boxes on the left where you can select multiple messages, star icons on the right for showing and tagging important messages, and up on the top-right corner, a button showing which

account you're looking at. Hit that button to switch over to another account, and you'll get a similar view.

Next to the sender name, you might see one, two, or no arrows, which Gmail calls "personal level indicators." One arrow (>) shows up next to messages sent directly to you and others. Double arrows (>>) appear next to messages sent only to you. No arrows indicate a message was sent as part of a mailing list. This doesn't work flawlessly, as you can see from my inbox example—I seriously doubt someone at BJ's Wholesale Club was writing me a personal note about "OVER 25 INSTANT COUPONS," but, generally, they give you an at-a-glance idea of a message's importance and origin.

Inbox Menu Options

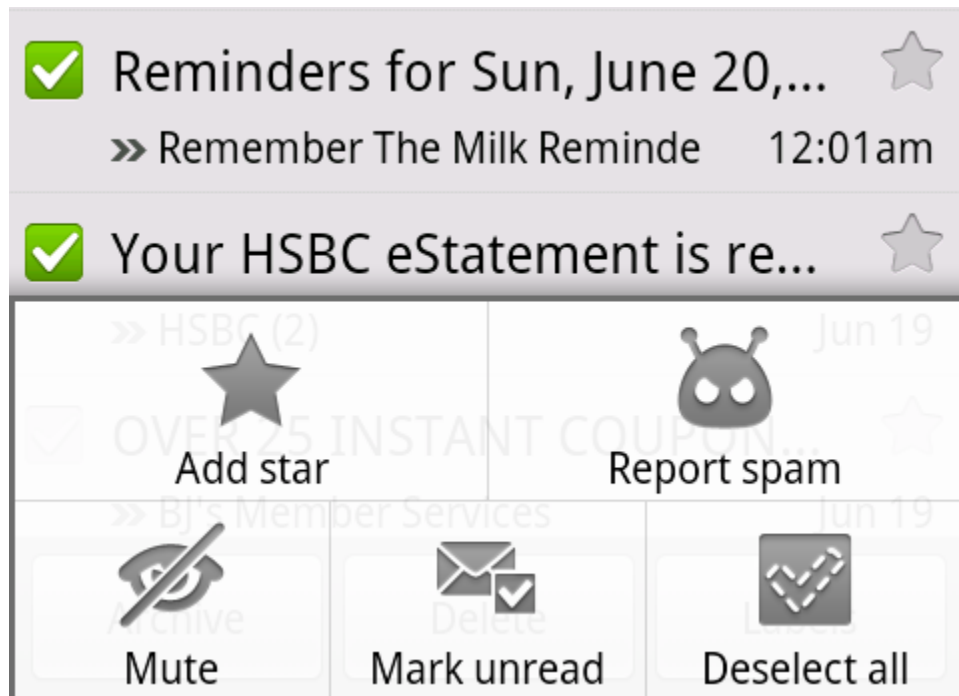


Inbox Menu Options

There are two kinds of option arrays offered when you hit the Menu key on your main inbox screen, depending on if you've selected

messages with the left-side check boxes. With nothing selected, you'll find lots of handy stuff tucked away—including the "Compose" button, which they really should have a separate button for.

- **Refresh:** Just what it sounds like—polls Gmail's servers again to see if there's brand-new mail. Google automatically "pushes" new messages to your Android phone by default, but refreshing can be handy if you know a friend *just* sent a message.
- **Compose:** Opens up a new email for you to address and fill out. Detailed just below.
- **Accounts:** Same as the button in the top-right corner of your inbox, it brings up a list of your Gmail-synced accounts to choose for inbox viewing.
- **Go to labels:** Brings up a list of all the Gmail labels you've created. Handy for labels that you've set not to show up in your inbox.
- **Search:** One of Gmail's biggest strengths is its powerful search. Hit this key to search the sender, subject, and message text of any email you've ever received and haven't deleted. (Note: Check out our sidebar on "Power Gmail Searching" for a quick how-to.)
- **More:** Just a link to the Gmail app Settings (which we'll detail in just a bit) and a "Help" option that opens a browser to Google's Gmail app instructions.



Menu Options with one or more messages selected

With messages selected, you get options relating to what you've selected. You can add stars, mark messages as spam, mute annoyingly recurrent conversations, leave messages unread, and start over with your selecting.

Power Gmail Searching The Search function built into your Gmail app is more powerful than it seems. At a base level, you use it like your own personal email Google; searching for **"The Wire" omar** brings up every email in which you've mentioned the HBO drama's coolest character. But Gmail has far more helpful [advanced search operators](#) you can get familiar with. Here are a few key power tools:

- **from:** Find messages from particular names or email addresses (*from:dave@somethingorother.com, from:dave*).
- **to:** Find messages sent to someone, whether by you or in another email you were copied on (*to:dave*).

- **has:attachment, filename:** Bring up only emails that contain attachments, and specify a search for an attached file you're looking for (*from:dave has:attachment, from:dave filename:presentation*).
- **-, "", ()**: Context tools for specifying "not" certain results (hyphen), exact phrases (quote marks), and use an AND-type requirement (parentheses) (*hamburgers - mcdonalds, from:dave "birthday party", from:dave (birthday party July)*).
- **is:** Follow with "read," "unread," or "starred" to specify status (*from:dave is:unread*).
- **after:, before:** Specify a date. You have to write the date in numeric, non-U.S. style—year/month/day (*from:dave "birthday party" after:2010/06/20*).

Reading and Writing Email

Click on a message, and you'll see something like this:

Android keyboard

Inbox



Kevin Purdy

...@gmail.com



To: Kevin Purdy

Jun 18

Kevin Purdy (@kevinpurdy) has shared a Tweet with you:

"Smarterware: Android Tip: Swipe Up to Extend the Keyboard <http://bit.ly/9xOhVB>"

--<http://www.twitter.com/Smarterware/status/16508649719>



Reply



Reply to all



Forward

Archive

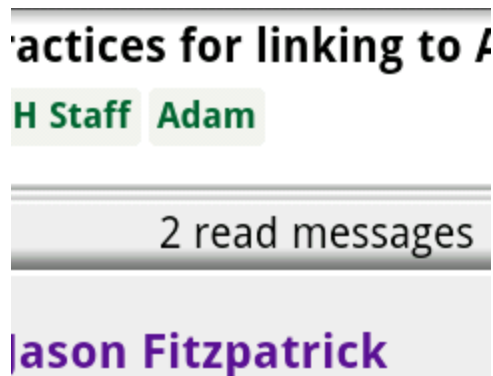
Delete



Composing an Email

Most of these functions should be pretty familiar to experienced email users. The unique Gmail features are the labels listed up top

(this message only rates a standard "Inbox" label, a "Star" button offered near the top-right, and the "Archive" button at the bottom-left. Put simply, "Archive" is how Gmail would prefer you discard messages you're done with—they get dropped from your inbox, and go into a kind of filing cabinet, not in your way, but easy to pull up again with a search. "Delete" just deletes things. Hitting the left-pointing button takes you to a previous (newer) message in your inbox, and the right-pointing button to the next (older) message you'll want to review.



Threaded messages in the Gmail app

When you're looking at a message that you or another recipient has already replied to, your Gmail app, like Gmail on the web, groups together the messages into a single email, but one with multiple "threads." They're visualized as paper-like tabs on top of the current message, as if you were thumbing through a series of memos in reverse chronological order. Click on that "X read messages" tab, and the messages expand for scrolling reading:

Best practices for linking to Android apps

Inbox

LH Staff

Adam



Adam Pash @ Lifehacker

adam@lifehacker.com



Jason brought up a good point this...

Jun 18



Whitson Gordon

whitson@lifehacker.com



Yeah, I pretty much agree with all...

Jun 18



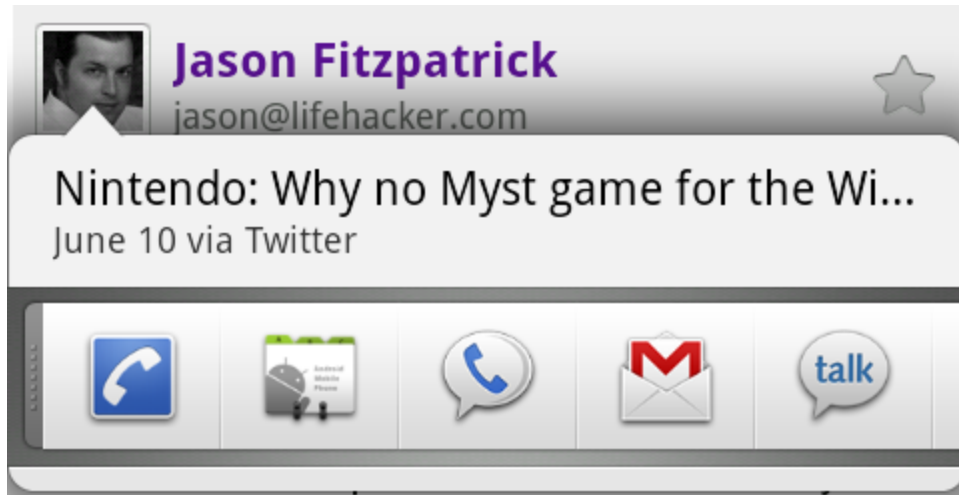
Jason Fitzpatrick

jason@lifehacker.com



Google Profiles Appear in Gmail App

As you can see, senders who have Google profiles set up, or that you've assigned pictures to, will show up with those pictures in their messages. But those thumbnail icons do more than show off your gang's great looks. Click on a sender icon, and you get a list of contact options for them, just as if you had a shortcut icon for them on your home screen.



Contact Options After Clicking on a Google Profile Picture

Message Menu Options

Hit Menu while reading a message, and you get a slightly different array of options than in the inbox.

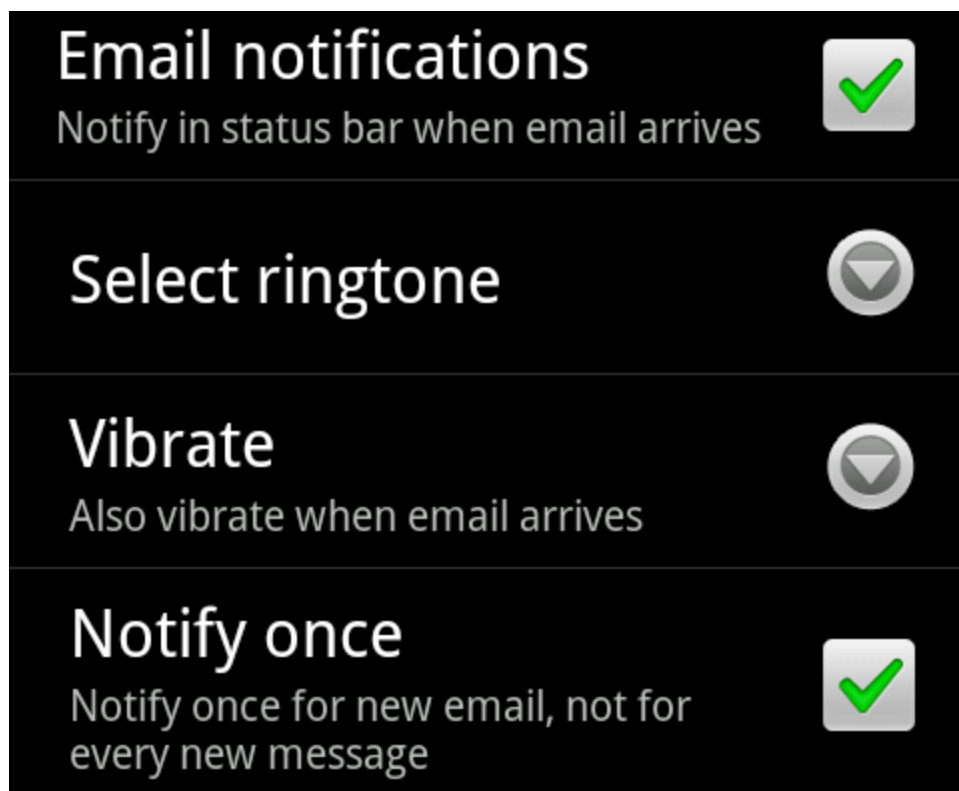
- **Change labels:** Add or remove Gmail labels from the message you're looking at. Tricky bit: you can also add or remove the "Inbox" label, which effectively moves a message into or out of your inbox.
- **Add star:** If you feel like the big Star button in the top-right of every message is just too far away, well, here's that option in the Menu.
- **Mark unread:** Restores the white color and bold type to your message, so it still gets your attention and increases your inbox count by one.
- **Go to Inbox:** Hitting the Back button on a message will take you to the last message you looked at, or back to the label or search you were looking through. Go to Inbox skips straight back to your main message list.
- **Mute:** As in Gmail on the web, it stops an email thread that seems to never end. In other words, that message from work

that's at 13 replies and counting, and keeps making you think you've got new, *important* mail? This button drops that thread into your archive, so it stops distracting you.

- **Under the "More" button:**

- **Report spam:** Gmail's spam filters are pretty strong, but aren't foolproof. Likewise, messages from your non-Gmail accounts might slip into your inbox from time to time. Report them as spam, and Gmail's servers will learn from the mistake, and maybe even save your fellow humans some grief.
- **Select text:** As detailed in the Browser chapter, you can select text to copy (and, presumably, paste to a text field later) by pushing a cursor to the beginning of the text with the trackball, clicking, scrolling to select what you want, then clicking the trackball again. You can also use your finger, but that's a pain.
- **Settings:** We'll detail those in just a tiny bit, we promise!
- **Help:** Opens a browser onto Google's web page with explanations and tips on the Gmail app.

Gmail Settings



Gmail App's Settings; Click "More" in Gmail App's Menu

The Gmail app's settings offer a lot of nit-picky details for Total Email Commanders, but also some smart options for anyone looking to fine-tune how and when their phone pings them about new email. They're definitely worth looking into.

- **Signature:** You can add in a signature that will appear at the bottom of every email you send. Usually, if you were to do this, you'd set it up through Gmail on the web.
- **Confirm actions:** Want to see a warning before your clutzy, too-fast fingers archive, delete, or send something? Check off those options here, and you'll get a little "Are you sure?" message.
- **Auto-advance:** When you act on a message by archiving or deleting it, you can have Gmail show you a newer or older conversation, or always head back to the inbox.
- **Message text size:** Choose the text size between "Tiny" and "Huge."
- **Batch operations:** Enable or disable your ability to add or remove labels from multiple messages at once.
- **Clear search history:** As with the browser, this wipes out all the searches that might reveal more than you'd like your snoopy friends to see, or that clutter up your search attempts.
- **Labels:** This one's important, and brings up a sub-menu where you can choose **Number of days to sync**. Starting at the Inbox and working your way down through Starred, Sent, and your own label creations, you choose whether to sync these message categories for either three days, or sync up everything. Note that "sync," in this case, just means what you can see right away when you pull up the label—if you keep scrolling down, your phone will ping Gmail's servers and provide older results. It's okay to leave all these alone if you're unsure, but if you regularly need access to a deep batch of certain email, set it to "Sync all" here.
- **Email notifications:** It's the master switch for whether or not you want your phone to drop an icon in the Notification Bar, or do other things, when new Gmail comes in. Turning it off nullifies all of the remaining options.

- **Select ringtone:** If you've got the sound turned up on your phone, you can have Gmail use a particular noise to alert you. By default, it's the same sound that all your notifications make.
- **Vibrate:** Decide when your phone vibrates on new messages: always, only when you've got it set to silent, or never.
- **Notify once:** Checking this means that your phone will only actively notify you when you get the first new email you haven't checked out yet—every subsequent email just quietly piles up, so that your notification reads something like "New email (4)." If you un-check this box, your phone will notify you on every new message, whether or not you just checked 10 seconds ago.

Using the "Email" App

Put simply, the app Android provides for non-Gmail email—simply named "Email"—is not as good as the Gmail app, but it works fine for the purposes of reading and writing. You'll probably use it if you have an Exchange-based email system at work, a webmail address you don't want to change to Gmail, or your own email address on a site you own that you don't run Google Apps on. Before you get started setting up your email account, check to see that it offers some kind of non-web access, and find out the details. Most accounts provided by internet providers—RoadRunner, Verizon, Comcast—do offer access. Among web-based providers, it varies—AOL and Hotmail offer POP or IMAP access, while Yahoo! requires a premium (i.e. paid) account for the lower-level POP protocol. The two most important things to know are the addresses for your **incoming server** and **outgoing server**. In most cases, the incoming server for your IMAP service will be something akin to **imap.somewebsite.com**, and the outgoing server will be **smtp.somewebsite.com**. For POP-based access, both servers are likely accessed at **pop.somewebsite.com**. Do a Google search for your provider and "IMAP settings," and you'll likely find other details, too, like whether you can enable SSL or TLS encryption on your

connection (which would be a good thing) and if there's a specialty port you need to set.

What Do "POP" and "IMAP" Mean? When you're grabbing your email, whatever you're using to do it—your Android phone, Outlook, your desktop client, even Gmail itself—uses one of two protocols, or systems, to do it: POP (Post Office Protocol) or IMAP (Internet Message Access Protocol). The majority of differences have to do with geeky details that only IT workers have to worry about. The main difference to you, the email checker, is that IMAP is better at working on multiple clients and deleting or archiving only the mail you've really looked at. An IMAP-connected email service knows that you read Email A while you were at work, and Email B from your Android phone later that night, but both your work computer and Android can go back and look at Emails A & B at any time. Over POP, Email A might not be available or might show up as unread when you pull it up that night. If you can, get IMAP access to your email for your phone, so you don't have to muck with server settings like "Keep a copy on the server."

Setting Up Your Account

12:36 PM

Incoming server settings

Username

androidbook@thepurdman.com

Password

.....

IMAP server

imap.1and1.com

Port

993

EN @ # 1 2 3 _ % ()
q w e r t y u i o p
& \$ 4 5 6 + : ; "
a s d f g h j k l
⬆ ! 7 8 9 0 / ? ⬅
ⓘ SYM - _ / Done

Email Account Setup

When you start up Email for the first time, you'll be asked to provide your own email address and the password you use to retrieve your email. Go ahead and fill those out. Unless the app knows something specific about your email, it will next ask what kind of account you're trying to connect with: POP3, IMAP, or Microsoft Exchange ActiveSync. As noted above, you'll need to know what kind of access you have available—most free accounts offer POP, and some paid services offer IMAP. If you're an old pro at this kind of thing, hit the "Manual setup" button and enter all the details you probably have memorized. Otherwise, hit "Next." Enter in the details that you know about your email provider's incoming server on the next screen. In the example shown, I'm entering an email address that I created on my personal site. The IMAP server isn't the same as the URL my email arrives at, and the port changed after I scrolled down and chose to use SSL encryption. Hit "Next," and you'll have to enter your outgoing server credentials this time. There are options for security as you scroll down, as well as an option to have the server verify your username and password when sending—check with your provider to see if these are recommended.

Entering in an Exchange account? You'll get something like this screen, instead:

Server settings

Domain\Username

\kevin

Password

.....

Server

.....com

☒ Use secure connection (SSL)

☒ Accept all SSL certificates

droid315964861107

Setting Up an Exchange Account

Account options

Email checking frequency

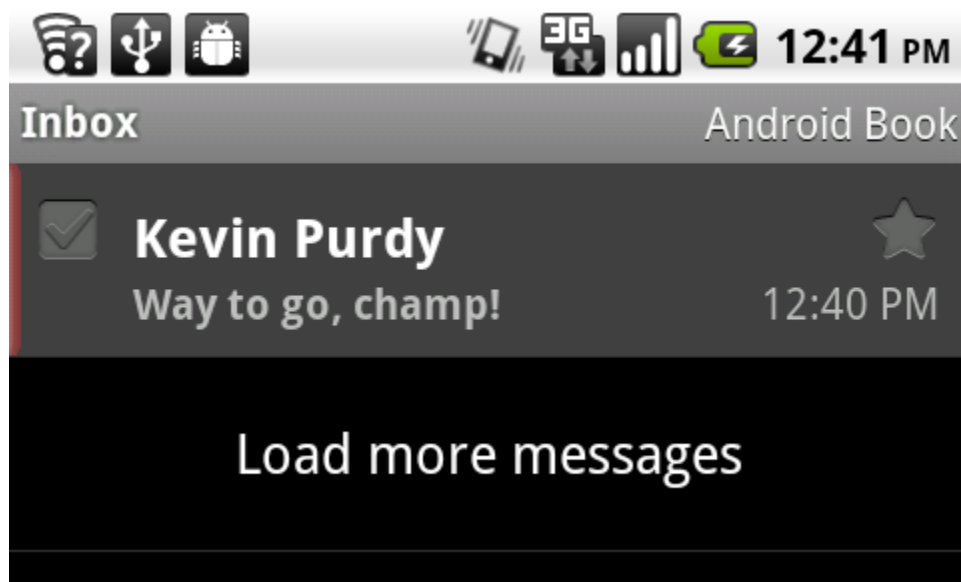
Every 15 minutes

☒ Send email from this default.

☒ Notify me when email arrives

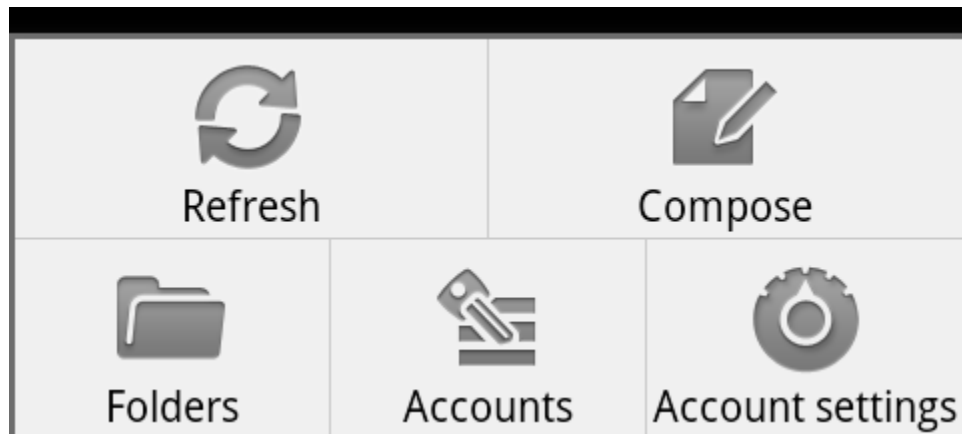
Setting account checking frequency

When you're all done filling in that exciting username/password/server information, hit "Next," and if your phone can connect to the server and sign in for your email, you'll get to choose how often you check for email, whether this account should be the default for sending mail (a good option, if you're not adding any more accounts), and if you want to get pings in the Notification Bar when you get new messages on this account. You can change all these settings later if you're not sure about any of them.



Non-Gmail Inbox

Here's how your inbox looks after you've loaded up your first account. You'll probably have more than me—nobody was writing to me about a book not yet published at the time of this writing. It's a pretty basic view: unread messages have bolded text, read messages do not. Just like the Gmail app, you can "star" a message. Also, like the Gmail app, most of the functions you need are tucked away but accessible by hitting your Menu key.



Email Menu Options

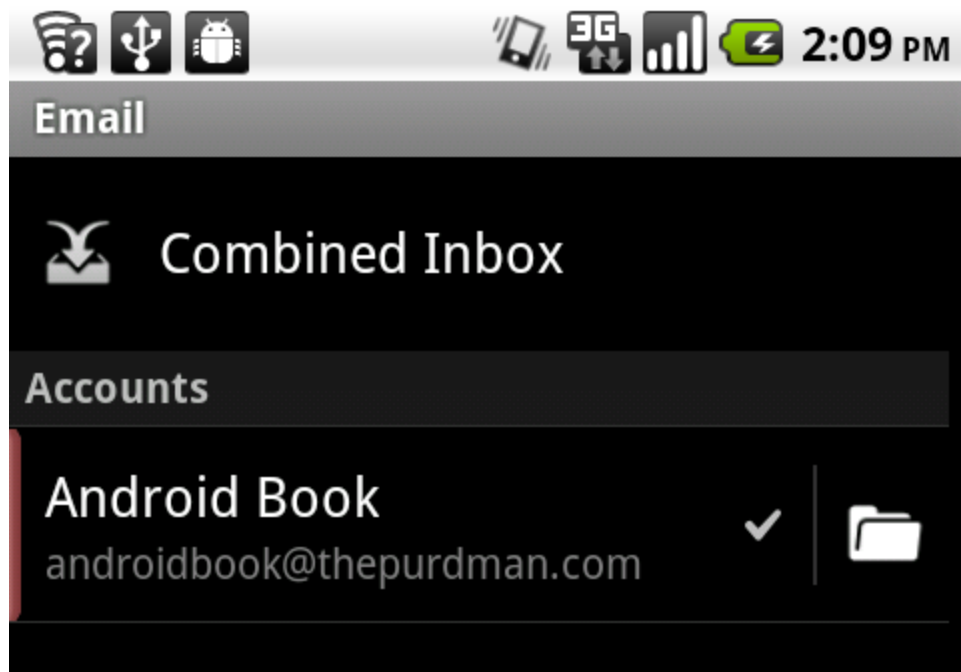
Refresh and Compose do just what they sound like. Folders shows you the folders you've created on that account—if you haven't created any, you'll only see the "Inbox," which is, in fact, a folder. We'll describe the Account settings in detail below. The Accounts button gets you to an interesting place, which we'll show in just a bit. Click on one of your emails, though, to see how Email handles it.



Menu Options from Inside a Message

You know what's a sad feeling? Sending yourself a fake motivational email, from one non-personal account to another. Anyways! Note that you don't get the threaded conversation view of the Gmail app—you see all the text from previous replies in the email itself, and each reply arrives as its own email. Hit the Menu button, and you'll get your standard options to delete, forward, reply, reply to all message recipients, or reset the message as if it were unread.

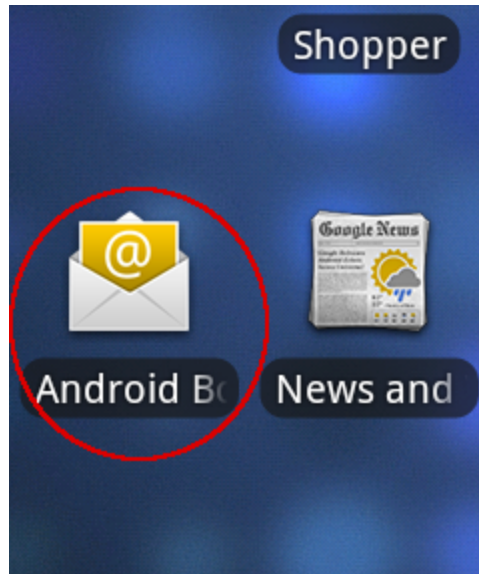
Back at the main Inbox, hit Menu and choose that Accounts button.



Combined Inbox

You'll see there a "Combined Inbox," which is just what it sounds like: a list of all your incoming email, across all the accounts you've loaded into the Email app. Want to add another account to try it out? Hit Menu again on this screen, and you'll see an "Add account" option.

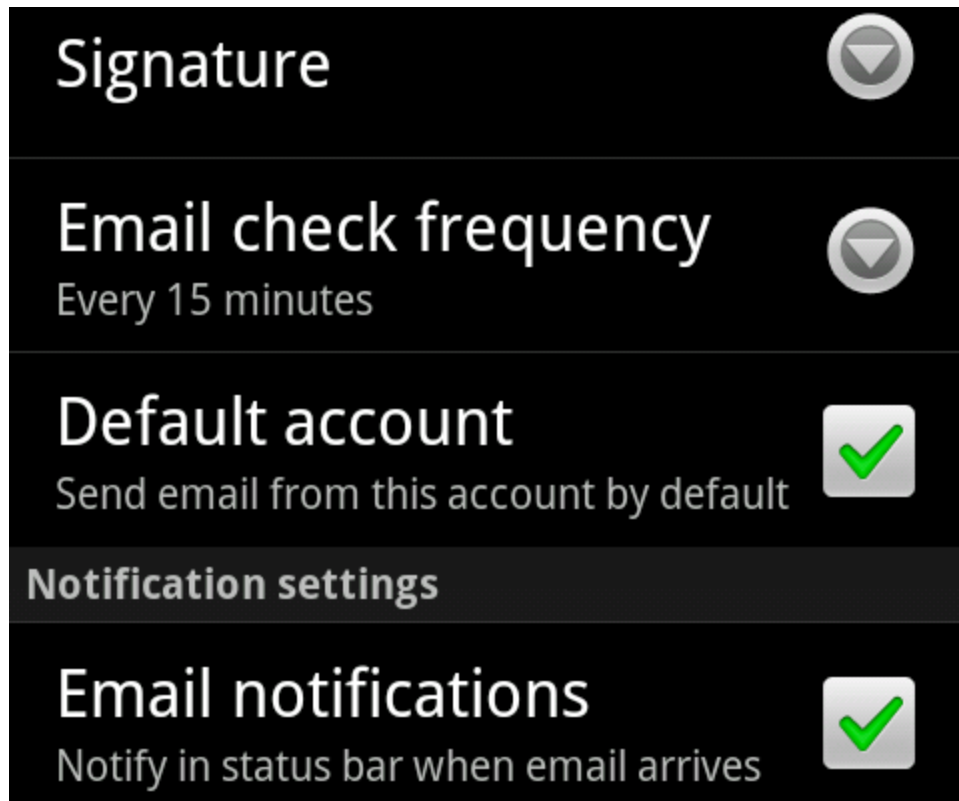
Make a Home Screen Widget for Email Accounts



Email Widget on Homescreen

After you add more than one account, what's the best way to get to a specific inbox? You could wait for new message notifications or open the Email app, hit the Accounts button, then hop into your chosen account. But you're probably aggravated just having to *read* all those steps, let alone tap them out. Head to your home screen, press and hold on an empty spot, and choose Shortcuts from the pop-out menu. Scroll down to find Email (it might not have been available before you set up an account), and you'll then be asked to pick out your account. Do so, and you'll now have a shortcut to a particular inbox on your home screen.

Email App Options



Email App Settings

There are no universal settings for the Email app—every account, meaning every email address, has its own settings. Here's what those settings mean:

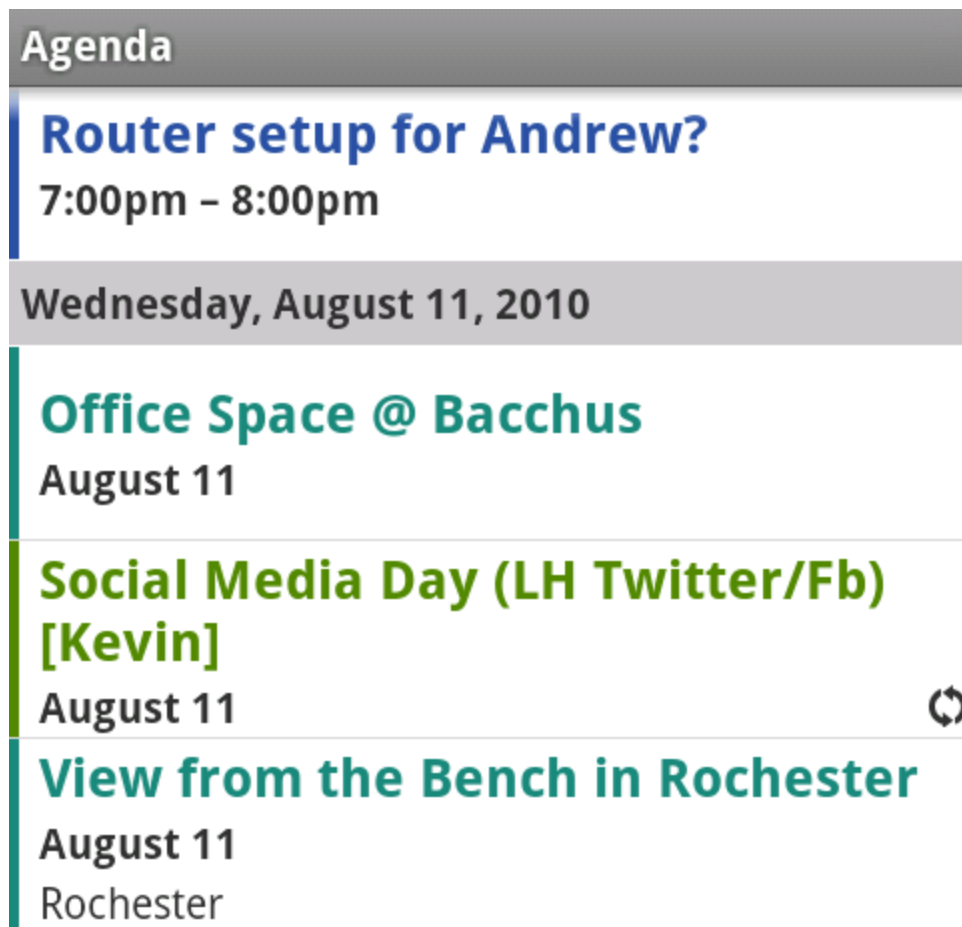
- **Account name:** How the app should label this account. Only you see this.
- **Your name:** Who your email appears to be from when it's received. You might, for example, add your company name ("at Microsoft") to differentiate from your personal email name.
- **Signature:** Optional bit of text that appears at the end of every email.
- **Email check frequency:** How often should your Android phone check the accounts you've loaded into Email, and then ping you if there's something new?
- **Default account:** Check to make this account the address that your composed mail is sent through. This doesn't affect your Gmail App settings, if you use both.

- **Email notifications:** Check to include this account in your Notification Bar "New email" pings.
 - **Select ringtone:** Give this particular account a unique ringtone. If you can keep multiple accounts straight with particular sounds, you are a special kind of aurally organized individual.
 - **Vibrate:** Determine if, and when, your phone should buzz on noticing a new email in this account. You get options for "Always," "Never," and "Only when silent."
 - **Incoming settings, Outgoing settings:** Change and fix your server settings and options.
-

As you might have noticed, your author is a Gmail devotee, and a big fan of the Gmail app on Android—much more so than the Email app. With the Combined Inbox recently added to the system, though, I can see it being a lot more useful—and for those with multiple accounts, Email offers a unique way of deciding when, and how often, you get pinged about each email address. Now that we've covered most of the nuts and bolts of your phone, let's move onto the fun stuff: music, apps, and texting your friends to brag about your new phone.

Calendars

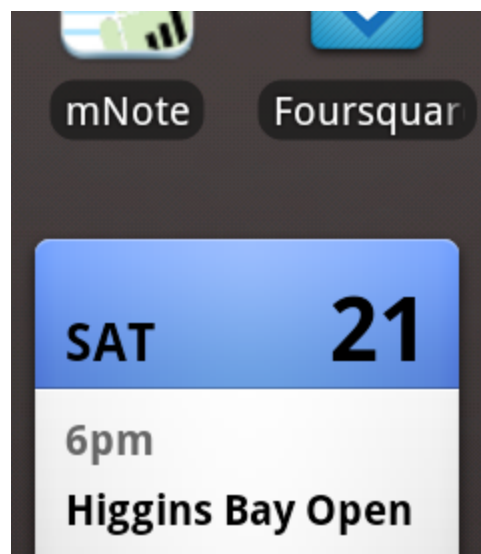
The Calendar App



Calendar App

The Calendar on your Android phone is a pretty simple app, but it definitely gets the job done. It shows your upcoming events, pulled in from your Google accounts, corporate Exchange server, Facebook, and any other services you've set up on your phone that offer regular events. It can also ring, vibrate, or drop a notification ping on your phone exactly as far ahead of an event as you'd like.

As noted, you set up your calendar accounts in the Accounts section of your phone's settings. To check out the calendar app itself, you can click the Calendar shortcut in your App Tray, but if you're a regular calendar checker (and aren't we all, these days?), you'll probably want to create a widget on your home screen to get a quick read and fast access. Press and hold on an empty space on your home screen, select the Widgets option, then select a Calendar widget.



Nexus Calendar Widget

The standard Android Calendar widget is a square that takes up four empty app spaces on your home screen. HTC and Motorola phones have their own customized Calendar widgets. HTC's widget includes three different size options: a single-row widget that just lists your next upcoming appointment, then two full-page widgets, in monthly grid or vertical agenda views, that pop up with information when clicked.



HTC Calendar Widget

Motorola Droid phones offer what this author considers the best Calendar widget around: a widget that lets you set a custom size, as well as which of your calendars are shown on that widget.



Motorola Calendar Widget

If none of those have exactly what you're looking for, open up the Market and search for “calendar widget.” There are tons of widgets, free and paid, available with all kinds of looks, sizes, and features.

Using the Calendar

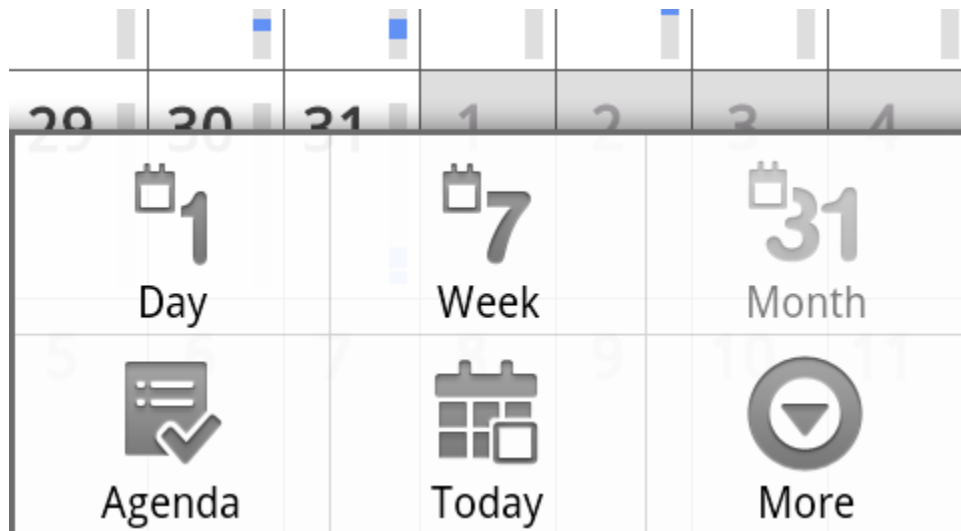
Despite their different looks and custom widgets, most Calendar apps on Android phones work the same. After opening the Calendar

app, you'll see a view of your events, perhaps in the “Month” view:

August 2010						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

Month View on Nexus

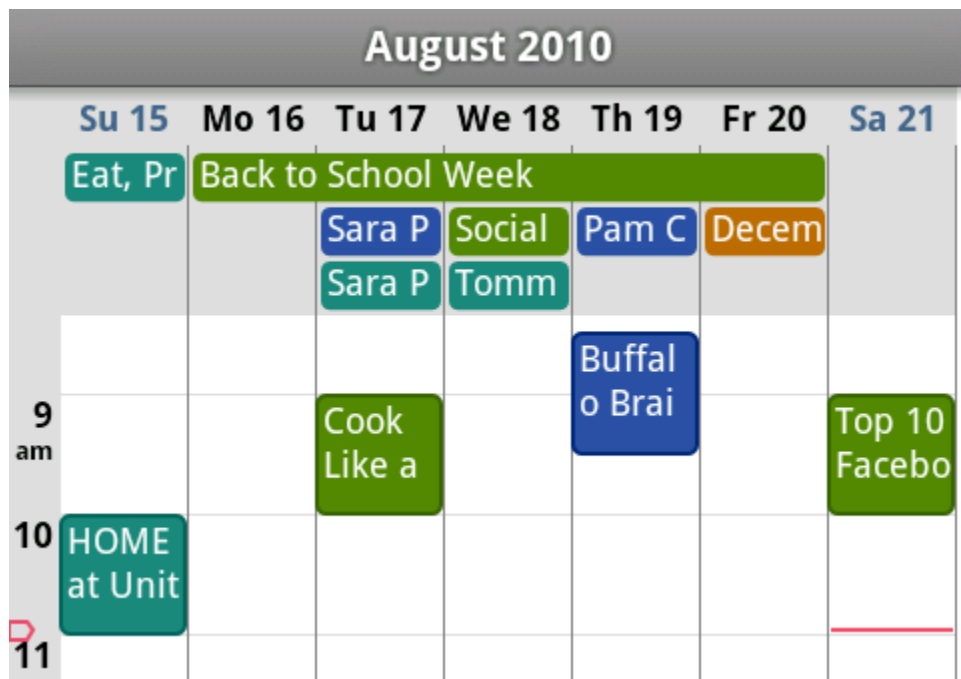
The Month view is a good way to see how generally busy a bit of time will be. To head forward and back in months, you swipe your screen up or down. This view doesn't really provide details until you click on a particular date, though. Let's change the view to something more detailed, shall we? Hit your Menu button.



Calendar Menu Options

Look at that! Four whole other views on just how many ways you're going to miss out on a leisurely day in the park in the near future ... and (ahem) a familiar More sub-menu.

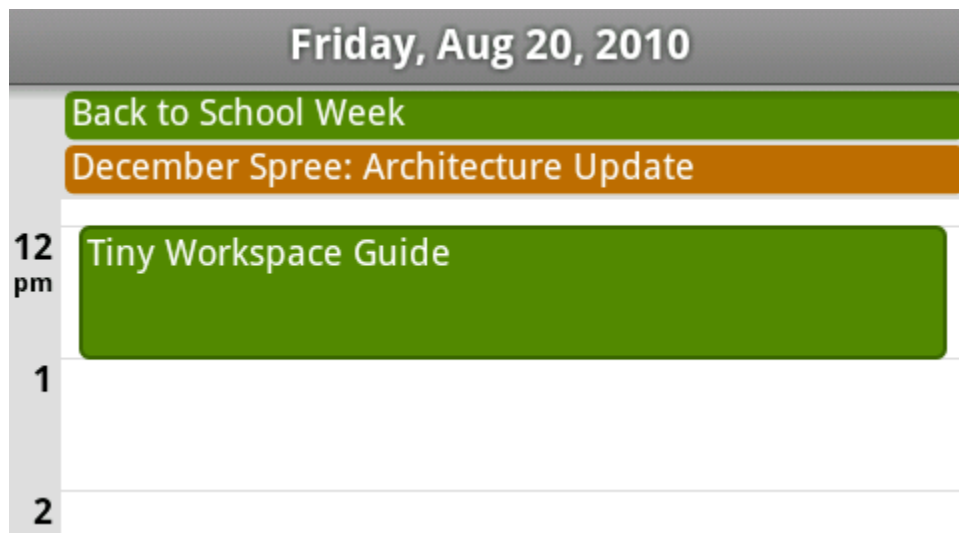
Week provides a nice balance between fine-grain, hour-by-hour detail and a larger overview of what's coming up.



Events in a Week Period

Events that are happening all week, or run for an entire day (or that you forgot to specify a time for) are listed at the top, and you tap on any item to get its details. To advance or go back a week, you swipe the screen left or right.

The Today and Day views are helpful when you've got a really crazy schedule, whether today or always. Each shows a vertical, hour-by-hour view of what's going on, and you slide between days by swiping left or right. The only difference is that Today brings you right to a vertical view of today's date, while you'd press Day if you were looking ahead in a Month or Week view and wanted to get a closer look at a particular day.



1 Day View

If you long-press on any day in a Calendar view, you get options to View, Edit, or Delete that event, along with an incongruous “New Event” option. Selecting “View,” or tapping any event on your calendar, brings up a look at what's happening.

View event

Higgins Bay Open

Calendar: Kevin

6:00pm – 11:00pm, August 21

Local time zone: Eastern Standard Time

[The Big House](#)

\$5 for beer or soda, \$14 for T-shirts

Attending?

Yes

Guests (1)



Elizabeth



Reminders

10 minutes



Add reminder



Long Press an Event to See Details

Everything you've entered in about the event, or that was automatically pulled from a server, is right here. The standard time,

date, and place are there, too, but notice the location listing that looks like a link. It is a link, actually—click it, and if you've entered in a proper address, it will pull up in Maps, where you can then easily get directions or turn-by-turn Navigation to that spot.

You can change your attendance status here, see who you've invited is confirmed as attending, contact those people by pressing their user icon, and, most helpfully, change, add, and remove reminders. The reminders you add and change are right on your phone. They will pop up in your Notifications Bar, at a minimum, but can also activate a ringtone, vibrate, and blink your notification light, if you'd like.

Need to change something, or want to create something new on your calendar? Hit the Menu button and click the New or Edit event options, or long-press on any event in your calendar.

Event details

What

Higgins Bay Open

From

Sat, Aug 21, 2010

6:00pm

To

Sat, Aug 21, 2010

11:00pm

All day



Where

The Big House

Description

\$5 for beer or soda, \$14 for T-shirts

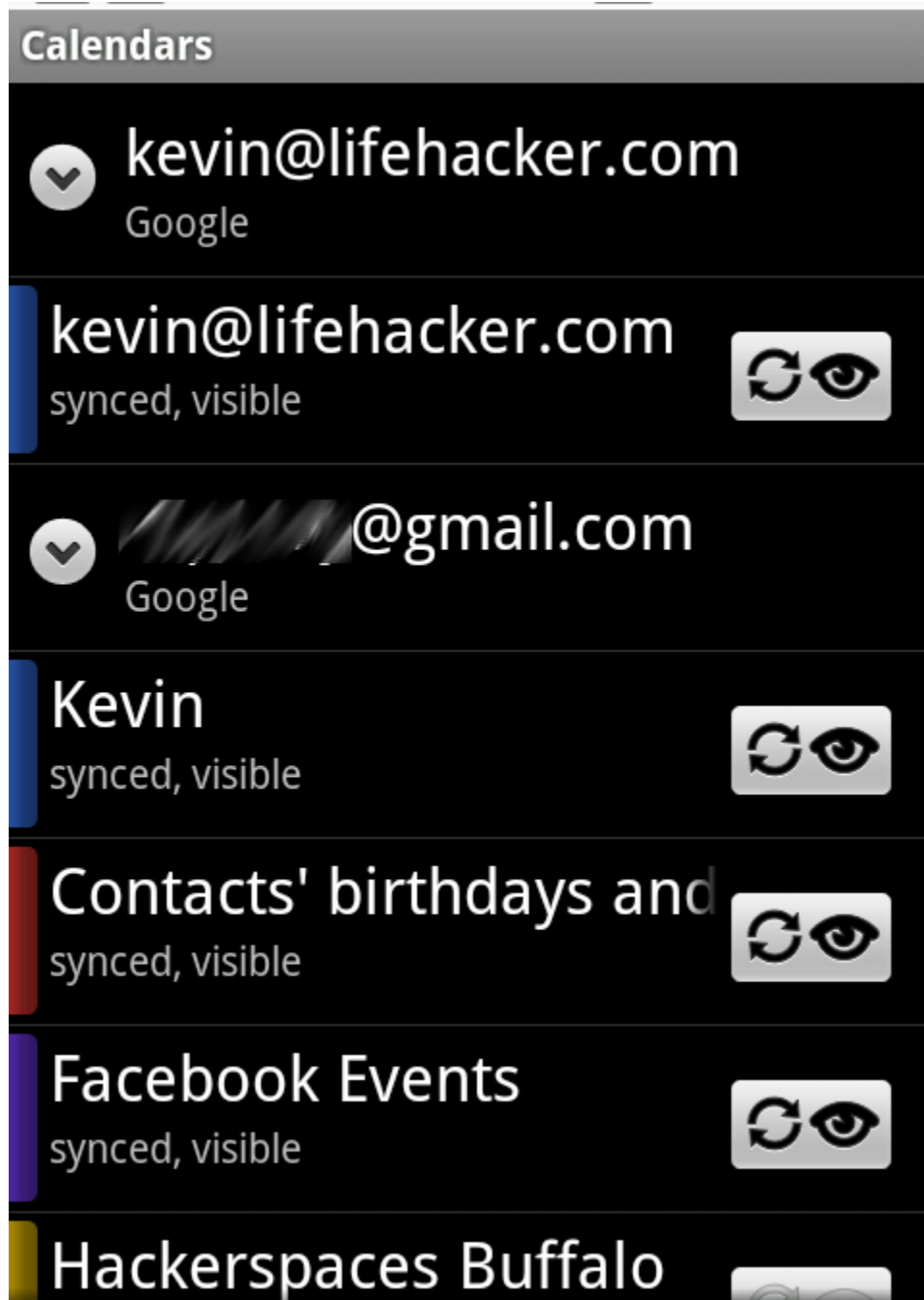
Editing an Event

This stuff is pretty self-explanatory, but it's worth noting that when you make a change to anything here, be sure to scroll all the way to the bottom and press the "Done" button, or else your changes won't be saved. If you made a mistake when editing, you can hit the

“Revert” button right next to “Done.” If you want to change your status as busy/available for that event, or make an event viewable by anybody, hit the Menu button and choose “Show Extra Options.”

Managing Calendars

You set up your calendar-syncing accounts during your phone setup, as well as in the Accounts section of your Settings. If you want to change how those calendars are displayed, or change their syncing status, hit the Menu button from the main Calendar display, tap the More sub-menu, then choose “Calendars.”



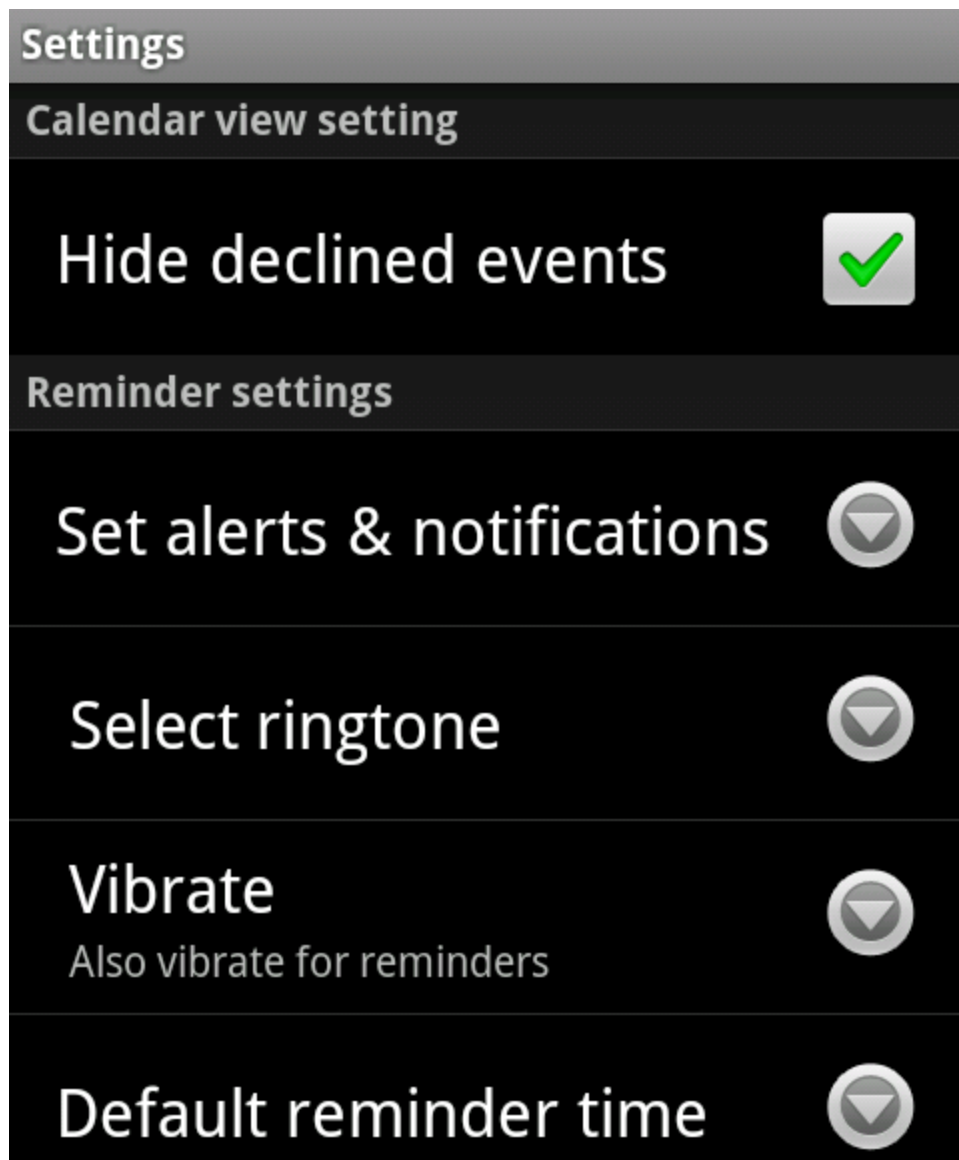
Calendar Syncing and Display Options

All your calendar-capable accounts are listed, so click on any account that you want to manage. In Android 2.2 and beyond, calendar options have been simplified significantly from previous versions. There's a button on the right side of each calendar listed under each account. Press it to change between one of three

settings: not synced or visible, synced but not visible, or synced and visible.

Why would you want to sync a calendar but not have it be shown on your widgets or calendar views? Some calendars are just overwhelming with the events on them, or redundant with other calendars you have showing, so you might want to take them off your main view. Keeping them synced, however, still lets you add events to those calendars from your Android, so others subscribed to the calendars can see them, and you can still search back through them.

Calendar Settings



Calendar Settings

There's nothing too surprising to see when you hit Menu, More, then “Settings.” There's the standard assortment of ringtone and vibrate options, but note three particular settings:

- **Set alerts & notifications:** Notifications are the items that show up in your Notifications Bar, but alerts actually pop up on your screen and grab your attention more actively. You can toggle between the two, or turn them both off entirely, from this setting.
- **Default reminder time:** Applies to events you create on this phone, and sets up a standard time to ping you, ranging from one minute to one week.

- **Hide declined events:** Does just what it sounds like, preventing others' items that you can't get involved with from cluttering up your calendar.

Text/SMS Messaging

Note: If you're using Google Voice to manage your text messages, you'll want to jump over to the chapter titled "Google Voice & Android: A Lovely Couple." And you should seriously consider Google Voice, too, if you're in the U.S. and wouldn't be devastated by a number change.

Note Part Deux: I'll be using "SMS" to refer to text messages throughout this chapter, both because it's more technically accurate, and because it makes it easier to refer to "text" as the stuff you're actually typing.

***Another Note*:** Many phones have replaced Google's stock Messaging app, initially detailed here, with their own variant. We'll cover two of the most common, from HTC and Motorola, toward the end of the chapter.

The Basics

Open up your Messaging app, and if you've got SMS messages, you'll see them. Messages you've read have a gray tint, while unread messages are white with bold sender names. If the sender is in your Contacts list, you'll see their actual name, and a picture, if they've posted one through Google or you've created one for them.

Messaging

New message

Compose new message



Elizabeth

Heard about some Great Lak... 5:46PM

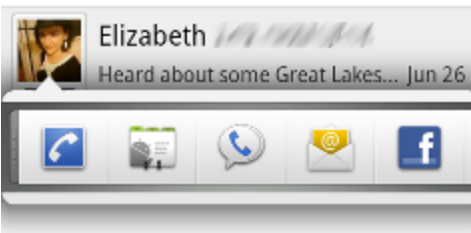


+1716

Hey man--when are you brin... 5:42PM

SMS Inbox

Compose new message



Quick Contact Menu

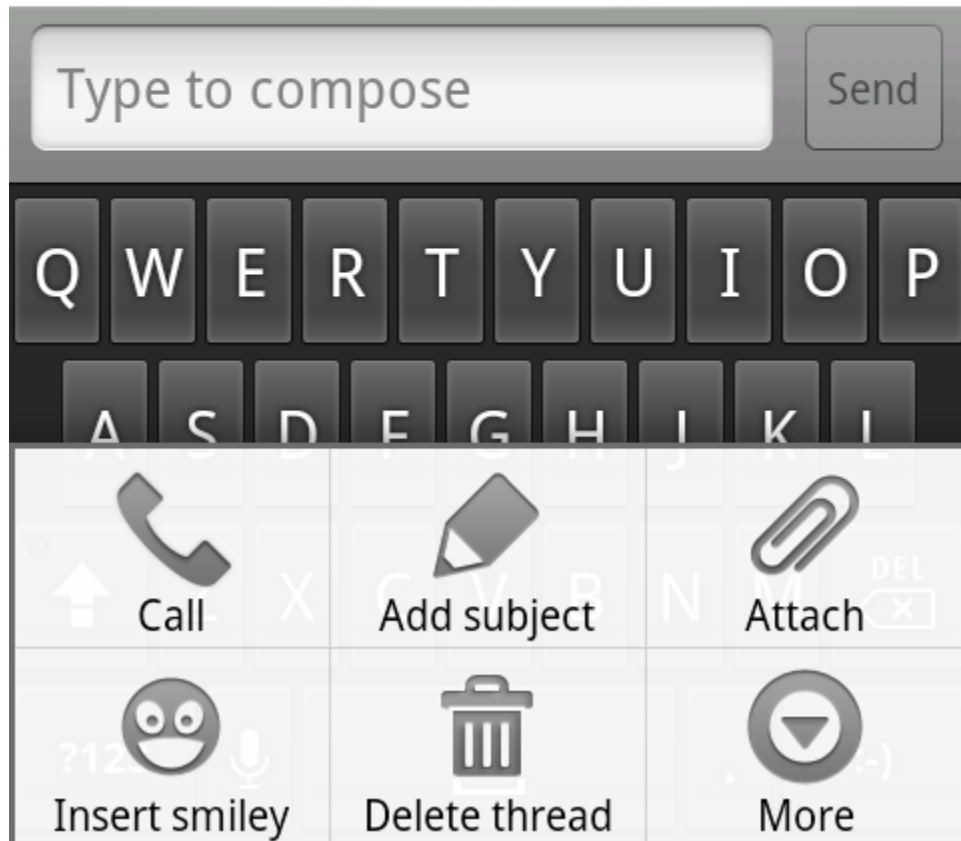
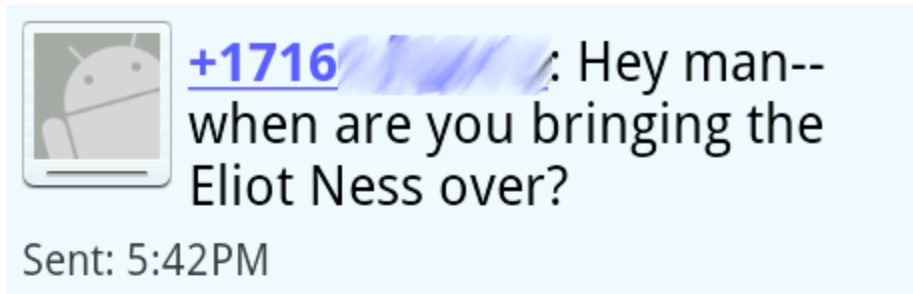
As with the Gmail/Email apps and home screen icons, you can click on the thumbnail picture of anyone in your Messaging inbox to pull up a quick menu of contact options—calling their primary number, seeing their contact, sending a text message back, or sending a message by Gmail/Email or Facebook.



SMS Action Menu

Hit Menu on the Main messaging screen, and you'll get options to write a new message, wipe out your inbox with "Delete threads," pull off an all-message search, or check your settings. The Search option is pretty darned neat, especially if you're an inbox hoarder. You can dig through all your SMS messages to see who sent you that note about the really good burger, and pull it up in seconds. The settings we'll explain a bit further down. For now, let's look at a message itself, whether composed new or opened up for a reply.

Writing and Replying to Messages



Replying to a Message

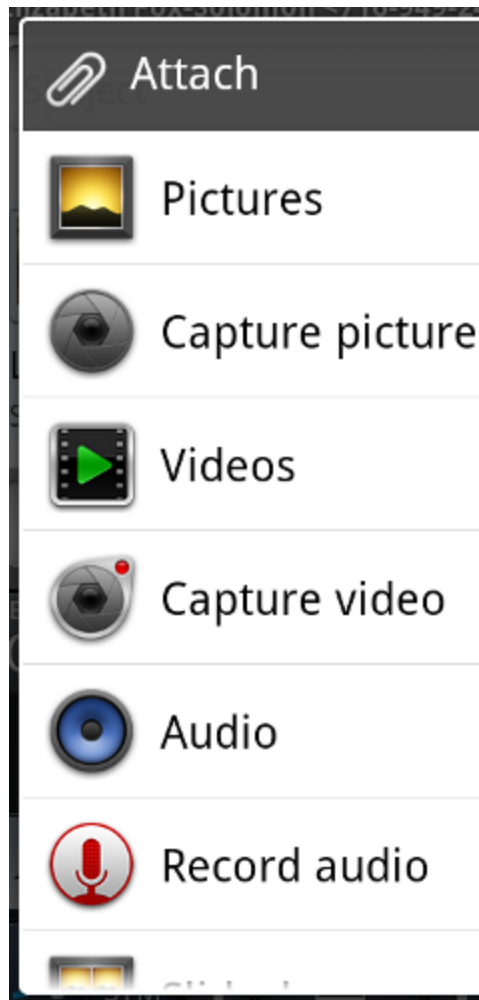
If you press-and-hold on the message itself, you'll get a few message options: Lock message (prevent it from being deleted in "Delete threads" wiping), Call, Forward, Copy message text (for later pasting), View message details (including exact receiving time), and Delete message.

Press Menu and there are further options, including calling the sender and deleting this "thread," which includes the message and all subsequent replies. "Insert smiley" automates the process of

adding punctuation in sequence to create a facial expression ("Bummer about your broken arm :-(or "Totally ate your last cookie! ;-P", perhaps). The "More" button brings up options to show all threads in a conversation if some have been hidden for space, and add the sender to your Contacts, if they're not known to your phone.

MMS Messages

"Attach" and "Add subject" do something somewhat specific: they convert the message into an [MMS](#), or Multimedia Messaging Service, message.



Attach MMS Options

The Attach button is where all the cool stuff is tucked away. You can attach a picture, video, or audio file you've already got on your phone, or throw in an entire photo Gallery if you're feeling like your cellphone connection couldn't be better. Or you can use "Capture picture/video" or "Record audio" options to turn on your camera or microphone for the express purpose of grabbing a shot/film/sound just to send to somebody.

One thing to note about MMS messages, and messages with attachments: your cellular carrier likely charges you extra for them, above and beyond what you pay for standard SMS messages. It might be a pittance (25 cents per message on my T-Mobile plan, for example), but getting addicted to showing your friends every moment of your new kitten's life will quickly get expensive. Consider using your very web-connected phone to send those pictures as email instead.

Messaging Settings

Here's what you'll find if you hit Menu and choose Settings:

Messaging Settings:

- **Delete old messages:** Keep checked if you're okay with your phone clearing out your oldest messages if you start running out of storage space. Kind of amazing if that actually happens, but, hey, takes all kinds.
- **Text message limit:** How many text messages you want to allow one conversation to take up—*not* a limit on the total number of text messages you can receive.
- **Multimedia message limit:** How many MMS messages should be allowed in one message—again, *not* a limit on how many MMS you can accept, though that would be nice.

SMS Settings:

- **Delivery reports:** Check this to request a message back every time you send a message, to confirm the other party received it. If you're on an unlimited messaging plan, and really want message security, go for it.
- **Manage SIM card messages:** If you've previously transferred SMS messages to your carrier SIM card from a previous phone for transfer or safekeeping, you can view, move, and delete them here.

MMS Settings:

- **Delivery reports:** Same as with SMS, this pings you back when the other person receives the message—but hasn't necessarily downloaded and viewed your attachment.
- **Read reports:** Sends you back a message when your receiving party downloads the content from your MMS message.
- **Auto-retrieve:** On your end, keeping this checked means that you automatically download the attachments from MMS messages sent your way. If you seem to get a bit of MMS spam, or have a spam-y contact, un-checking this could save you some money, as you can then delete their heavy messages before you get charged for viewing them.
- **Roaming auto-retrieve:** When you're outside of the coverage area of your carrier, but you can still pick up a signal from another carrier (so you're "roaming"), checking this has your phone automatically reach. For almost all intents and purposes, keep this unchecked, unless your company bought this phone for you, and it's both flush with cash and insistent on your getting up-to-the-minute video messages (in other words, you live in the future of "Back to the Future II.")
- **Notifications:** Un-check if you don't want SMS/MMS notifications to show up in your Notification Bar—which might

make sense on vacations or temporary do-not-disturb stretches.

- **Select ringtone:** Pick the unique sound for when SMS/MMS arrive. Note that you can make this distinct from your Google Voice SMS.
- **Vibrate:** Choose if you want your phone to vibrate on new SMS/MMS messages "Always," "Never," or "Only when silent."

The HTC Messaging App



HTC Messaging App

HTC's own SMS app, "Messages," is fairly similar to Google's own Messaging, and operates much the same way. The big differences are the "Quick text" offering, which lets you save snippets of text that you'd use all the time in SMS messaging ("Driving, call you later," maybe, or "See you there") for quick pasting into any message. The search function is also tucked behind the "More" menu in the composition mode, and the whole app keeps the feel of the Sense interface.

Motorola's Messaging



Motorola's Messaging App

The Messaging app on the Droid X and other Motorola phones is, if anything, more minimalist than Google's own fairly stripped-down app. Fewer options, but you can still get the basic SMS/MMS material across.

One more note about the Messaging app itself on Motorola's Droid phones: it's more than just an SMS center—it's a way to see every

message that's come your way over email, SMS, Twitter, Facebook, or other accounts.



Droid Universal Inbox

To see all your messages from across all streams, hit the icon for "Universal Inbox." You'll see Gmail messages, direct messages through Twitter and Facebook, email from your other accounts, and SMS messages. You can choose "Text Messaging" from the main menu to read and send messages, but at any point, you can also hit the "+" button in the upper-right corner to create a new message, and choose text message to start composing an SMS.

The built-in Messaging app doesn't seem all that new, different, or Google-y from a glance—and Google Voice is, in some ways, the better way to go with an Android phone—but it's all the other features of your phone that make Messaging more convenient than with a "chiclet" phone: voice input, alternative swipe-style keyboards, copy/paste between SMS and other apps, and good apps for sending and viewing pictures, audio, and video.

Onward we move, to the magic of voice commands, the awesomeness of Google Voice, and, finally, the very cool stuff you can find in the Market.

Maps, Navigation, and Car Mode



Turn By Turn directions with Street View

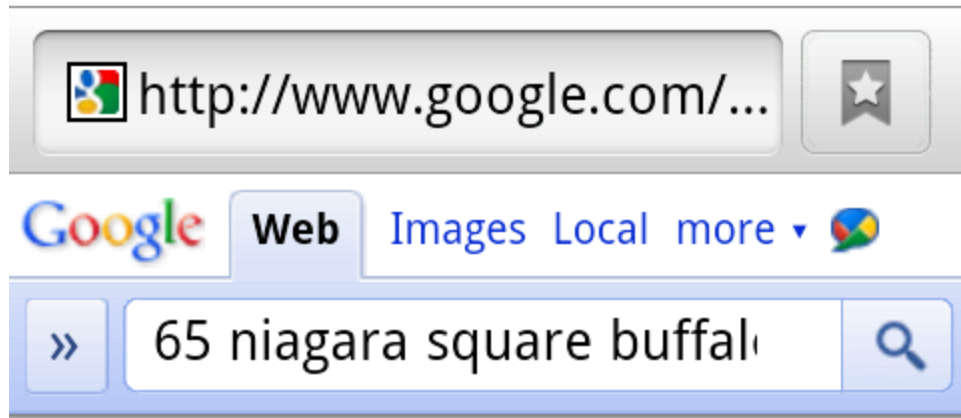
Every Android phone available today has a free turn-by-turn GPS system built into it. It's constantly updated with road conditions, traffic updates, and can find nearby restaurants, fuel, or other stopping points better than any GPS unit out there.

By itself, Google's free Navigation app adds a few hundred dollars of value to every Android phone out there, not to mention reducing the number of theft-friendly devices in your car. But the way Navigation is implemented—being able to say "Navigate to Home Depot" and find yourself with spoken directions to the nearest big orange box—is something that needs to be seen to be believed. The Maps app itself is pretty great and useful in its own right, but it's Navigation that's the show-stopper.

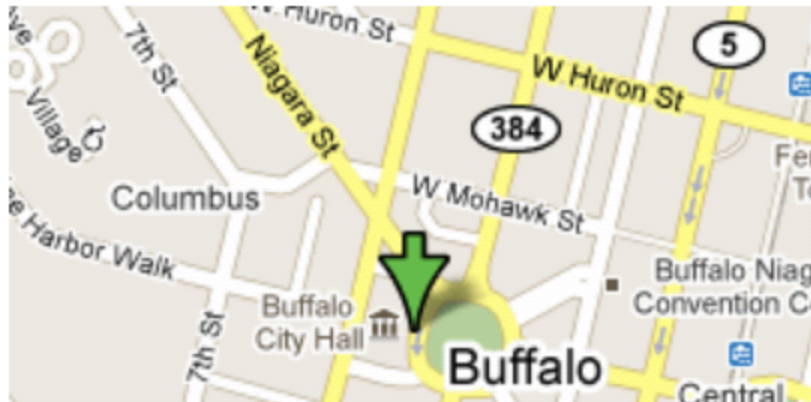
Because Navigation is a kind of complement to the main

Maps app, we'll start with Maps, then show you how to get the most out of Navigation. Let's get traveling.

Get Into Maps



[65 Niagara Square Buffalo, NY 14202](#)



Maps Search Link

You can, of course, launch your Maps app by tapping the Maps shortcut, but if you've been following along, you know there are a few other ways to pull up an address in Maps:

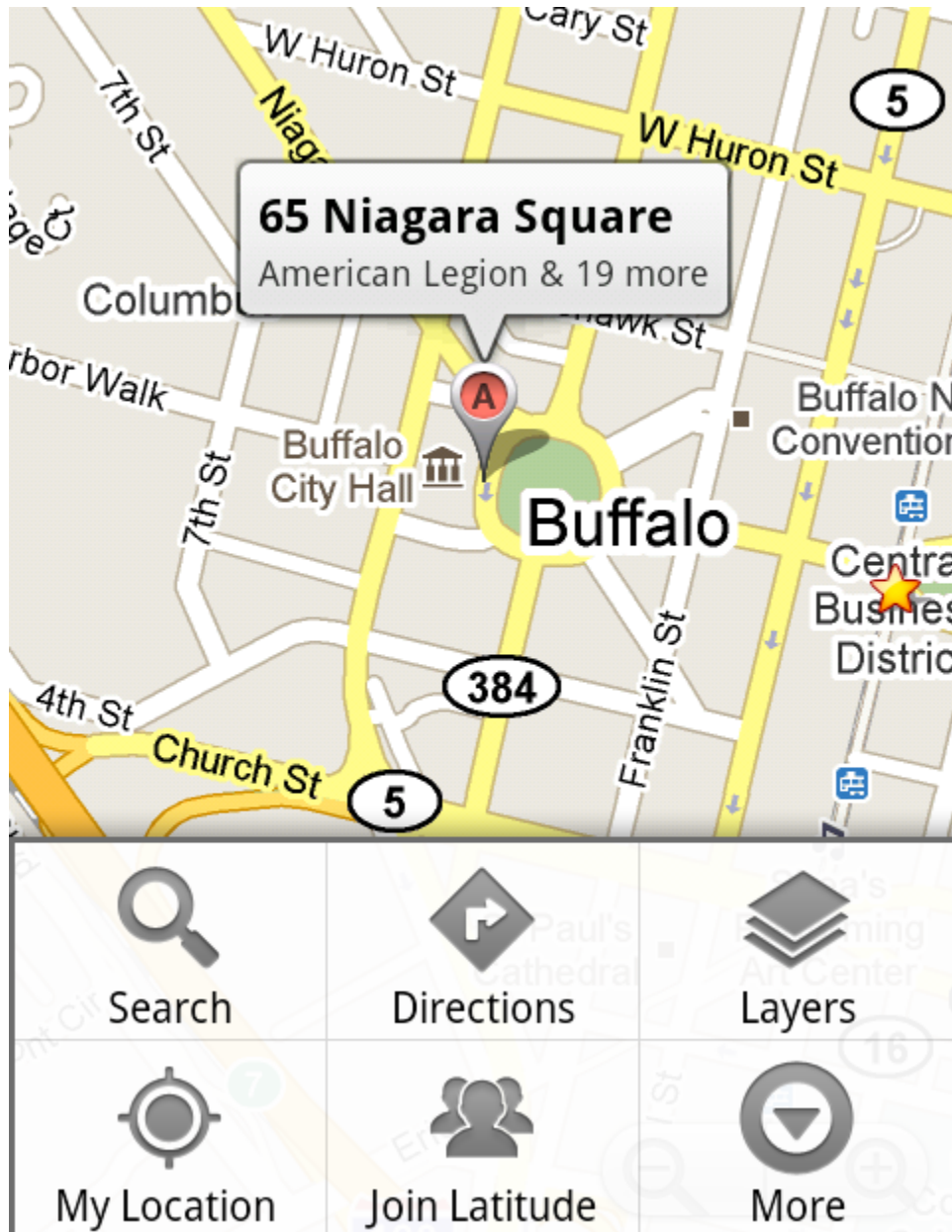
- **Enter an address into the search box** on your home screen (or click your hardware Search button) by typing or using voice input, then click the link that should come up first in your

browser. It will open directly in your Maps application (or at least ask if that's where you want it to open).

- Open your Contacts list and, if you've spent some time filling out addresses for your friends and business acquaintances, **click the address from their contact sheet.**
- Create **shortcuts for your most-visited addresses** on your home screen (discussed in the "10 Things to Do Right Away on Your Android Phone" tutorial).

However you land in the Maps app, you'll find Maps is one of the most powerful and feature-rich apps on your Android.

Getting Around Maps



Maps Main Screen

The main view of the Maps app works much like Google Maps works on your browser in the internet, with some finger-friendly modifications. You can pinch and expand with your fingers to zoom in and out, or use the +/- magnifying buttons that appear in the lower-right corner.

Your Maps view should generally load with a rough frame on your location, and it will try to use either GPS, Wi-Fi, or cellular

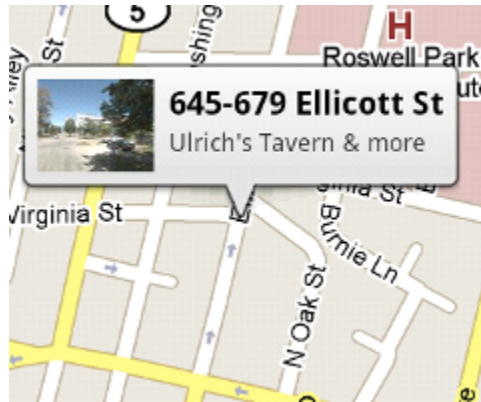
triangulation to get closer. For a more precise look at where your phone is right now, hit the Menu button and click "My Location" (or the little blue button in the lower-right you can enable through a "Labs" feature, detailed later).

Hit your phone's Menu button and you'll get your main deck of tools:

- **Search:** Just like it sounds, it's how you enter an address to show on the map, or look for points of interest ("pizza boston MA," "ann taylor cleveland," "library buffalo ny")
- **Directions:** Brings up the directions prompt, pre-loaded with "My Location" as the starting point. We'll point out the particulars of Directions in just a bit.
- **Layers:** Decide what kinds of nearby places and information is shown on the map. More on Layers, another rich sub-category, in just a bit.
- **My Location:** Adjusts the map and shows a bright blue dot where it thinks you are, based on what Maps can glean from your phone's GPS antenna (if you have it turned on), Wi-Fi information (again, if active), or rough cellular triangulation.
- **Latitude:** Or "Join Latitude," if you're not a member of Google's social network that's based on location check-ins.
- **More:** Brings up a sub-menu with:
 - **Clear Map:** Wipes away any search results, directions, or other data you've got showing.
 - **Starred Items:** Show a straight-up list of items you've starred in Google Maps, either from your desktop or mobile devices.
 - **Labs:** Shows a list of more experimental Maps features you can enable—some of them very handy (Traffic with Labels, as-the-crow-flies Measure tool), some esoteric (exact geo-coordinates).
 - **Switch Account:** Use a different Google account, so you can pull up different Starred Items, search history, and so on.
 - **Help/Terms, Privacy & Notices/About:** The boring stuff.

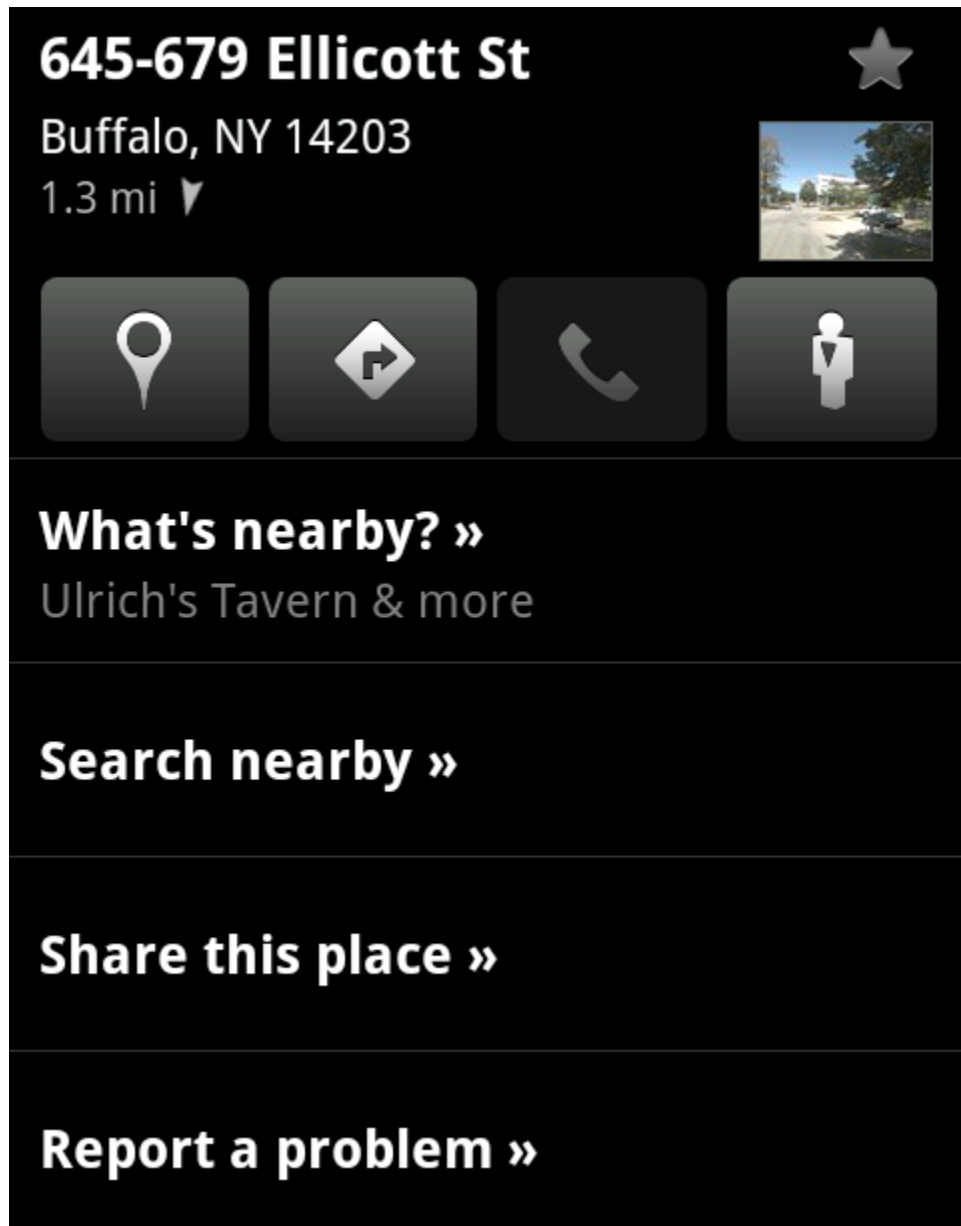
Seeing What's Nearby

So you know now that "My Location" shows where you are, and "Search" can help you find the next place you want to go, but Maps also offers a few ways to get a look at what's near you or near a place you want to go, without having to know street addresses.



"Get Anywhere" Feature

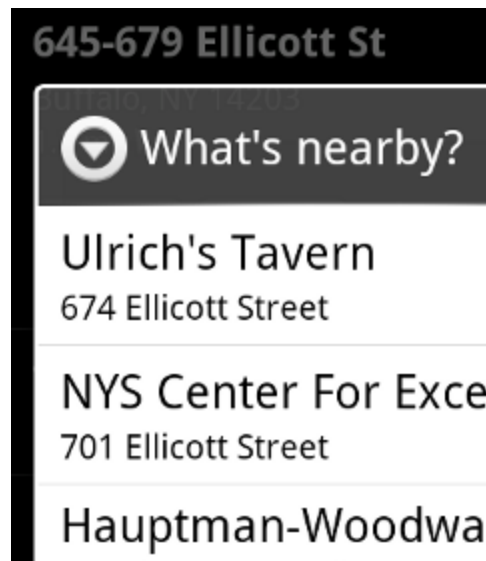
Want to get a rough bearing on street numbers near a certain spot, or see if there's a particular business nearby? Press down and hold on any spot on the map. You'll get an instant picture of the view from the street as captured by Google's car cameras, along with an address range and description of nearby points. But the really cool stuff is what shows up when you click on that pointer "bubble."



Clicking the On Map "Bubble"

It's a geo-geek dream. The upper-left corner has the address, city, and ZIP code, along with the distance from your location. The upper-right has the Street View thumbnail, but also an empty "Star" icon, which you can click to "Starred Items," where you'd keep a list of frequently visited spots or points of interest. The buttons below provide quick access to, from left, seeing the spot on the map again, getting directions or turn-by-turn Navigation to this spot, a direct

calling link if it's a listed business, and a full-fledged Street View exploration.



"What's Nearby" Option

Underneath the buttons are list items that are more like additional buttons. "What's nearby?" pops up a list of the five closest spots that Google can find, which you can click to bring up that new place in this same black detail screen. "Search nearby" brings you back to the search box with that particular location as a boundary. "Share this place" shoots up your list of share-friendly apps (Twitter, Facebook, email, etc.), and "Report a problem" sends notice to the Maps team that an address, phone number, or whatever else you're reporting is wrong.

If you search out or click on a particular business or notable spot, your screen might look a lot busier:

“This place has great food and good prices.” ... “Once inside, the decor is OK. The food and service, however, were very good!” ... “The french fries were a bit bland.”

[yahoo.com](#), [citysearch.com](#)

Reviews »

★★★★★ 16 reviews

4 stars

5 stars

Buzz about this place »

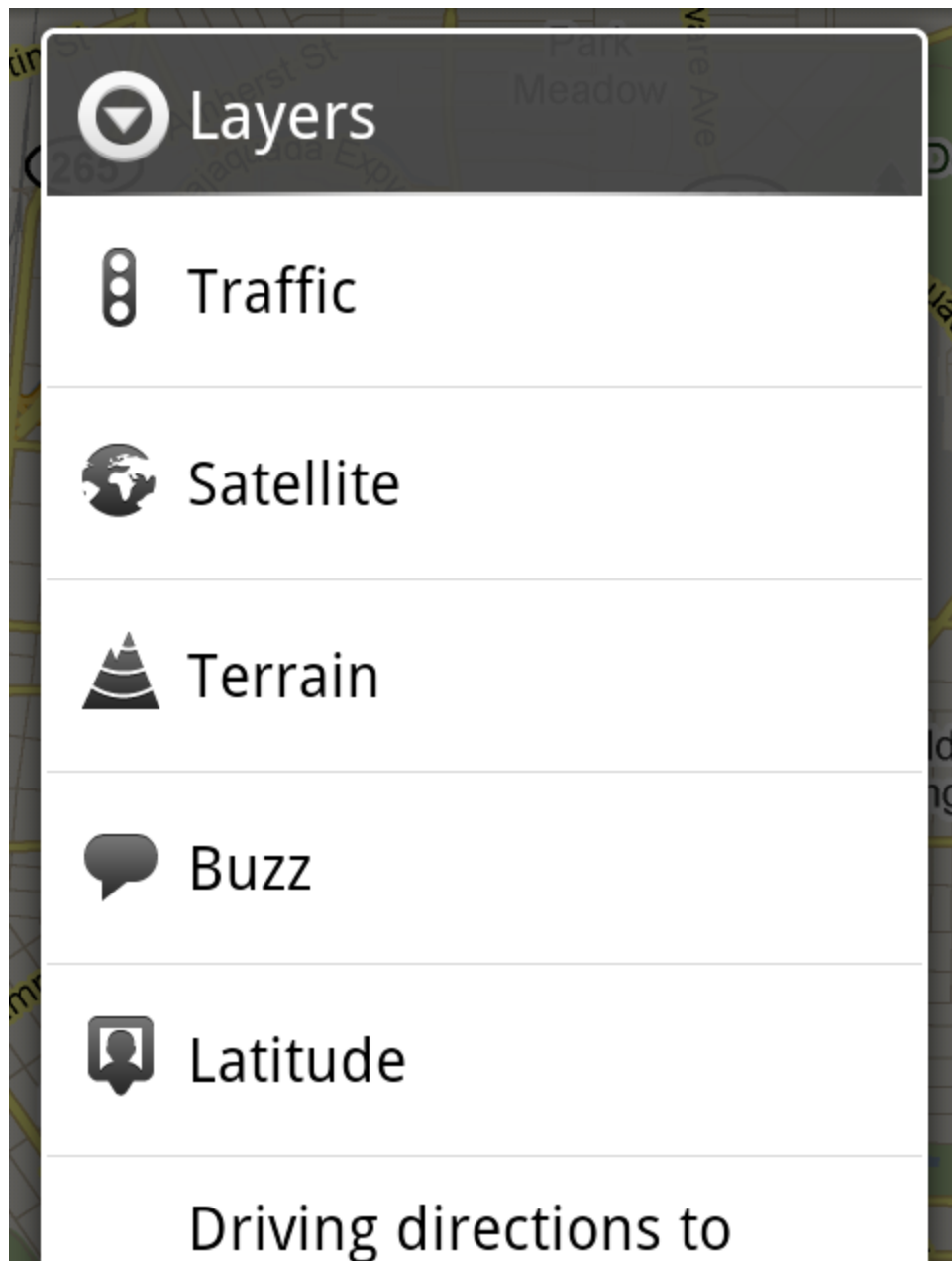
Share this place »

Add as a contact »

Web Information and Sharing Opportunities

Maps aggregates reviews from sites like Yahoo!, CitySearch, Yelp, and other community sites and creates an average score from one to five stars, with color coding so you get the idea at a glance. You also get options to "Buzz about this place," using Google's Buzz social network, or add the place to your contacts list for easy calling later.

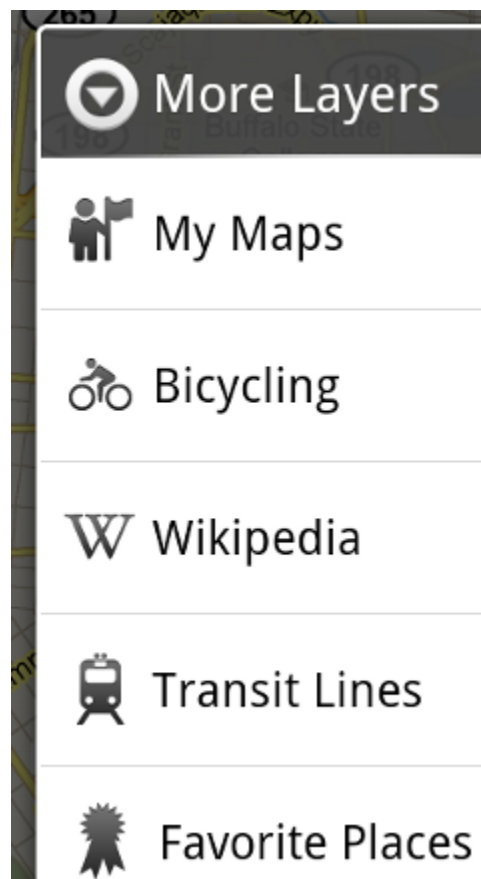
Seeing More with Layers



Layers Options

Maps' Layers tool shows you interesting or helpful data points nearby without making you search for it. Hit your Menu key and choose Layers (or click the tiny button in the lower-left corner, if you've enabled it in Labs). You'll get quite a lot to choose from.

"Traffic" shows traffic conditions, in color stripes ranging from quiet green to busy red, based on state data, news reports, and other Google-powered apps using GPS monitors at the moment (seriously). "Satellite" gives you overhead pictures of an area instead of abstracted maps, "Terrain" brings up topographic lines, and "Buzz" and "Latitude" show what people have been saying or doing at places in those Google-powered social networks. If you've saved previous driving directions as a map layer in Google Maps, you'll have those available, too. But wait, there's more! Click the "More Layers" option to see.

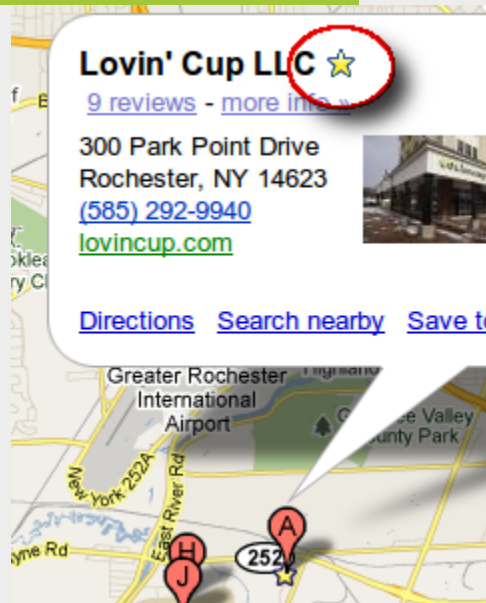


More Layers

"My Maps" is a sub-menu that will show plotted points that you've saved as a particular map, or that you've imported from other Maps data. In other words, if you set up a map of the best places to get a Reuben in New York City and saved it as "Lowell's Gotham Reuben-

stravaganza," you can pull it up from this My Maps offering and see all those delicatessens and corner joints on your mobile device. Google's [explained how to get started with My Maps](#), and you can search for "My Maps Help" to find it. "Bicycling" shows bike paths and designated bicycle lanes, "Wikipedia" points out landmarks or businesses discussed on the massive user-edited encyclopedia, and "Transit Lines" shows, well, just what you'd think. "Favorite Places" is a fun/odd little add-on: pick a city (New York, Bangkok, Paris, etc.) and a person (Al Gore, Kevin Rose, Yo-Yo Ma, et al.), and you'll see favorite spots mapped all over.

Star Items to Save Serious Time



Starring Items in Maps

You might notice those "star" options wherever you look in Maps on Android—or you might miss them entirely. That'd be a shame, because they're great at saving you time, especially when you're usually trying to get directions as fast as possible. The most convenient way to make use of stars is to open a browser on a standard computer, sign into Google Maps with your Google/Gmail account, then search out a few of the places you most frequently head to, or pick out places

you're going on a road trip, vacation, whatever. Click the star icon next to their names when you pick them out, and that star-iness will instantly sync to your Google account. Next time you're in Maps on Android, hit that Bookmark icon, and you can quickly pick from your list of starred items rather than typing out a name or address. Need to prune down your list of starred items? Head to Maps in a computer browser and hit the "My Maps" link on the left while signed in, or open up Maps on your Android, hit your Menu key, choose "Starred Items" from the More sub-menu, and pick off the no-longer-starry places.

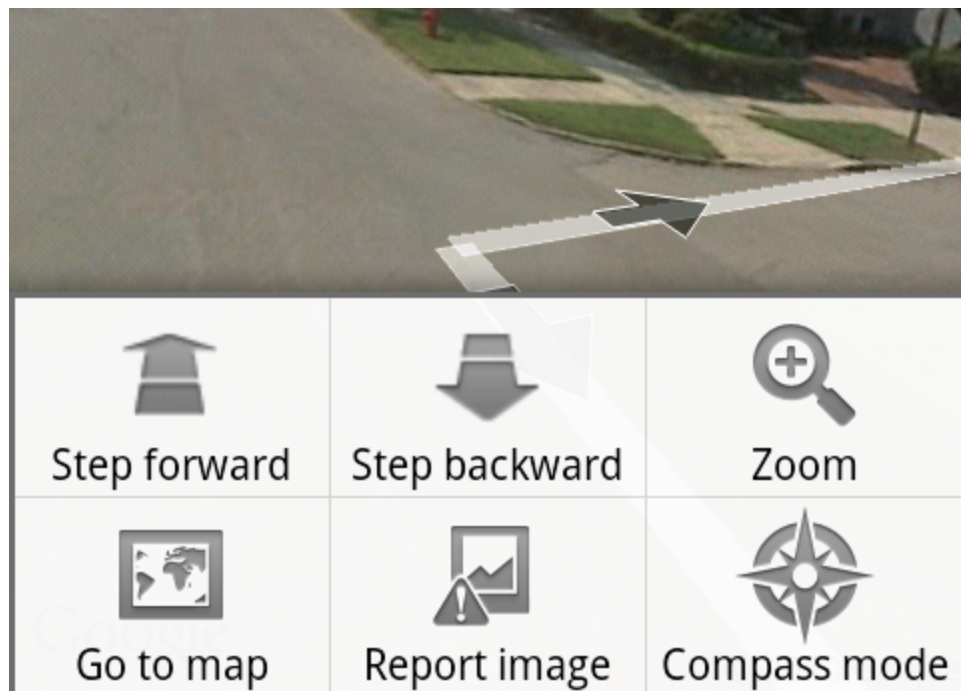
Get Your Bearings with Street View



Street View

Street View uses Google's impressive collection of car-mounted camera shots of just about every drivable surface in the U.S. (and other countries) to give you a heads up on what you're looking for when you're searching for something. In other words, it keeps you

from knocking on the wrong door, or blowing past your destination on a one-way street.



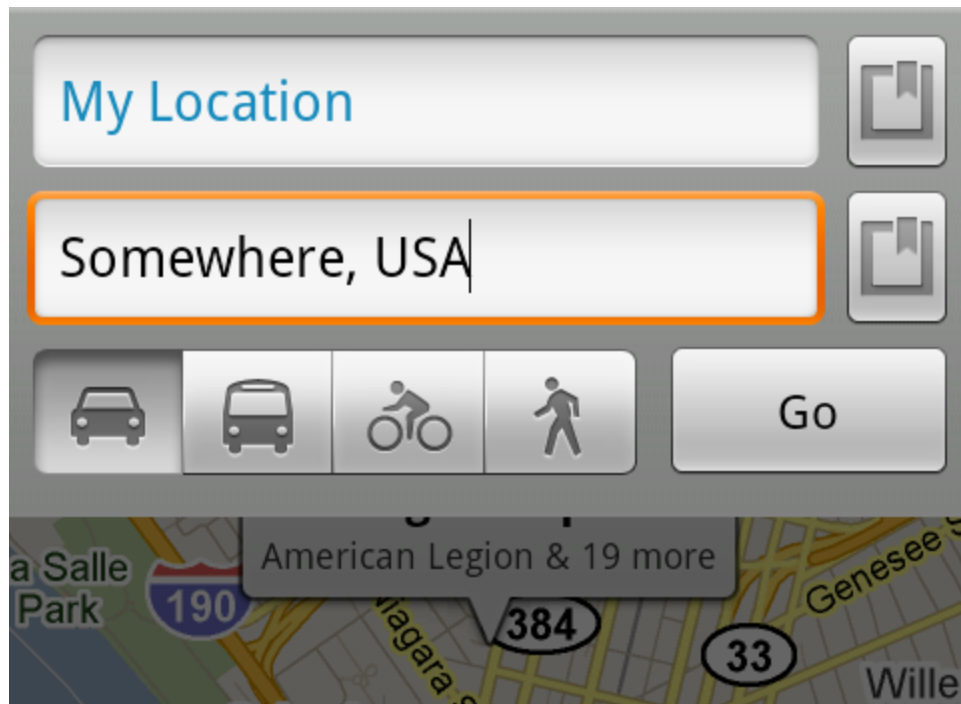
Street View Menu

When you click the Street View icon on the black details page of a search result, or a spot you pressed your thumb on, you'll get a view from the middle of the street where you were looking. You can rotate your view 360 degrees around by scrolling with your finger, zoom in on a particular sight by double-tapping it (or using the magnifying icons that will appear in the lower right), and move up and down streets by clicking the arrows you'll see on the street. You can also hit the Menu key to access any of those movement or zoom functions.

Note that the Menu button brings up one truly neat function: "Compass mode." Enable this, and your view in Street View mode rotates and tilts depending on which way you're turned. It's a combination of sensors in the phone and location data that do it, and it's pretty darned neat.

Getting Directions

If you've click the Directions button from the menu options, or hit the link off the details page for a particular post, you'll first get a drop-down prompt:



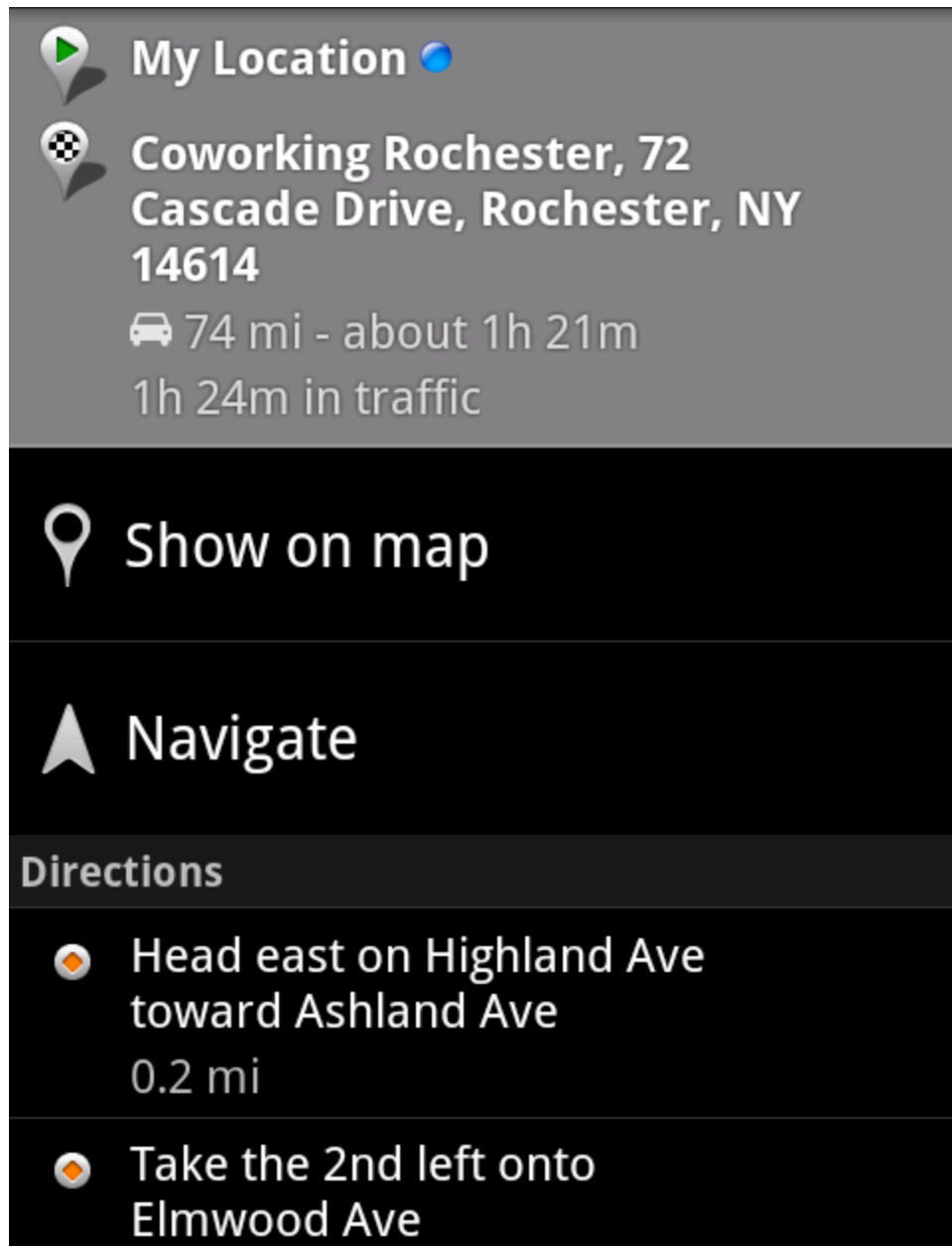
Directions Drop Down Prompt

In most cases, the first box, the start point, will be auto-filled with your phone's idea of where you are. The second box down is your destination. You can change either location manually, or click the bookmark-style icon to the right and get a few more convenient options: Contacts, after which you'll choose a person you've plugged in an address for; Point on map, which will ask you to tap somewhere; and Starred items, to choose from a list of locations you've previously starred on this phone or in another Google Maps session.

Underneath the two locations in the Directions prompt, you'll see buttons for the mode of transportation you'd like Maps to consider:

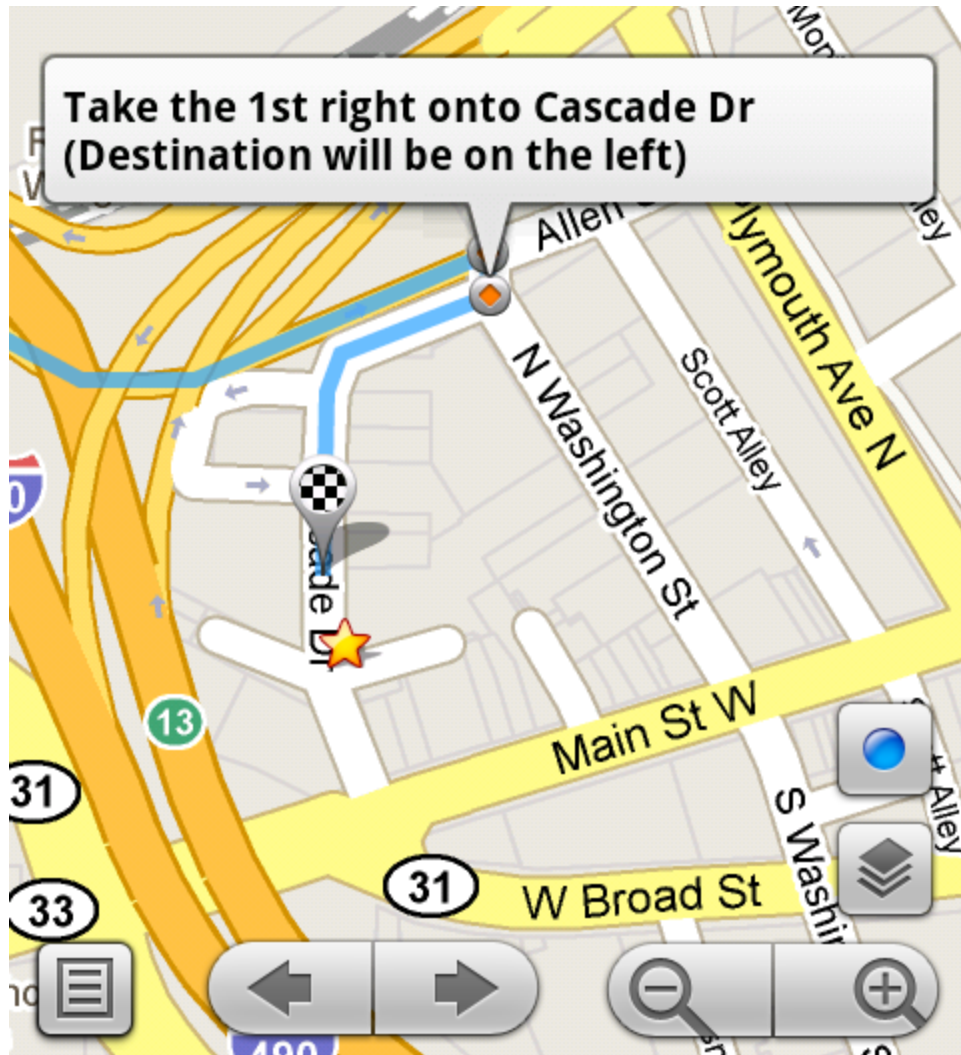
car, public transit (bus and rail/subway, mostly), bicycle, or walking. The changes in route depend on where you live, but Maps generally makes smart adjustments based on this choice—less busy streets for walkers and bikers, picking the next closest stop for a bus or train if Maps knows the schedule, etc.

When you've got your start and end points in place, hit "Go."



Set start and end points and get directions

After your phone gets the goods from Google, you'll get a read-out of the turn-by-turn directions, along with options to see them laid out on either an overhead map, or as turn-by-turn Navigation (which we're just about to detail). If you click on any of the steps shown in the directions, you'll be taken to that spot on the Map.



Click on a step in the directions to be taken there on the map

From that spot on the map, you can zoom in, move around, and do anything else you'd normally do on a map—including turning on Layers to see nearby points of interest. You can also move forward or back in the steps needed to get there with the left and right-pointing arrows. This is the main mode of getting directions in Maps. It's useful for when you've got a willing navigator to click through the

steps, or if you're low on battery or just not into setting up a full Navigation connection, though that's pretty easy, too. Hit the list-style icon in the lower left to get back to your directions.



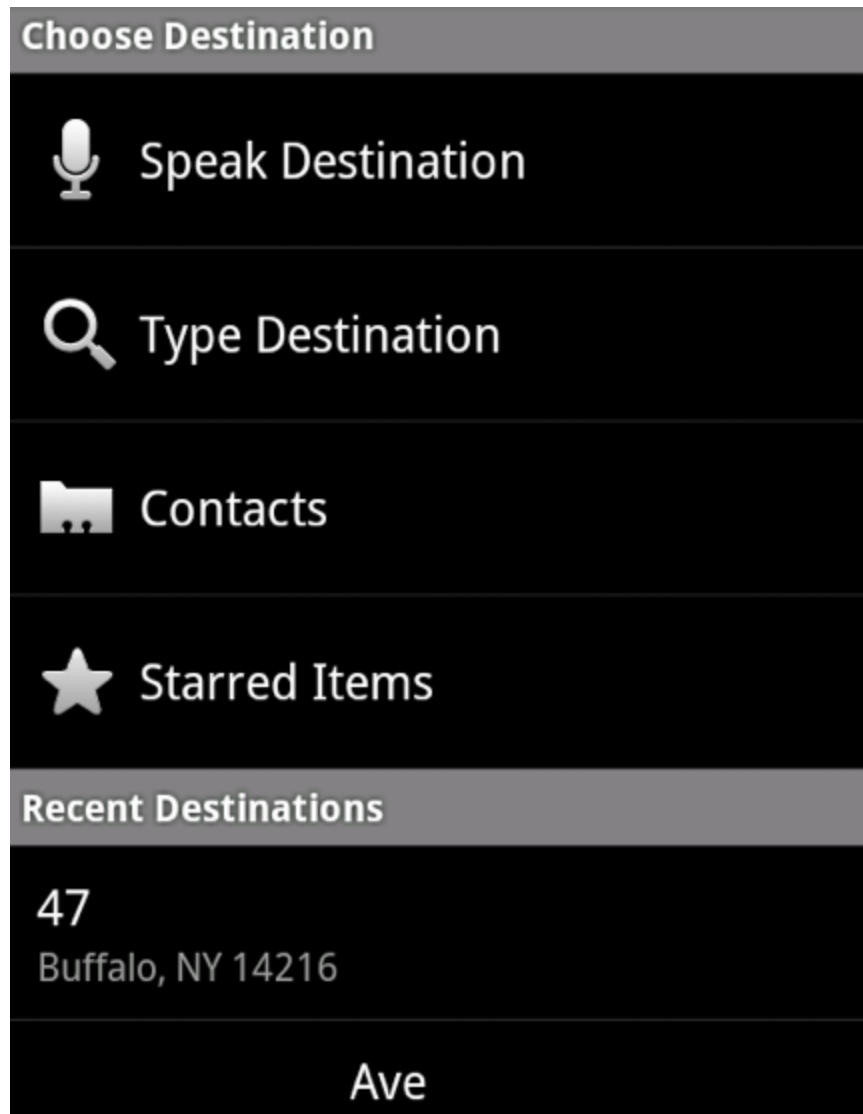
Directions Menu

What you see in the directions list is Google's standard choice for getting from where you said you were to where you said you wanted to go. Being humans, though, we often take detours, encounter construction or massive traffic, and occasionally want to get back home. Hitting the Menu key is how you fix that. From your pop-up options, you can reverse your route, or hit "Update route" to have your phone try to figure out where you are and re-route the directions from that point. "See map" and "Report a problem" do just what you'd expect (though, remember, the "problem" is with the route you're given, not the app itself).

In the Options sub-menu, you'll get two useful filters to check off: "Avoid Highways" and "Avoid Tolls." Check these off, hit "Update," and Google will re-write your path for you.

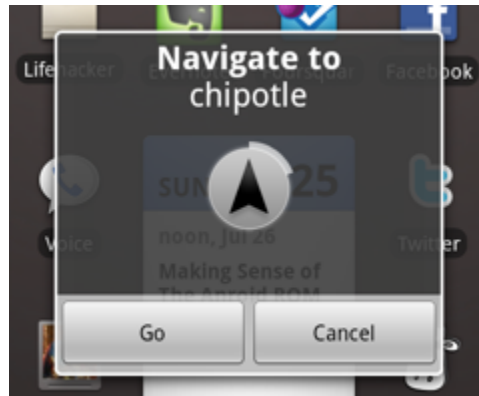
When you've got a serious drive to take on, you should opt for Navigation over Maps' own directions. It's automatic, smart, and very good at doing what it does.

Using Navigation



Destination Menu

You can launch Navigation on your Android phone by loading up the "Navigation" app from your app tray, by choosing "Navigate" from the options in a set of directions, or through a direct directions shortcut you can place on your home screen (see the "10 Things to Do Right Away" tutorial).



Voice Input

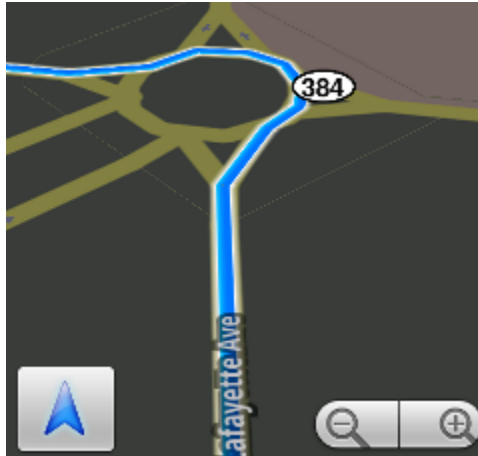
Even more convenient, though, is hitting the Voice Input button on your search box, or holding down the Search button on your hardware, and speaking something that starts with "Navigate to." It's best used for non-specifics—it won't likely pick up standard street addresses with much accuracy, for example—but that openness also makes it genius. You can name a business and get options to navigate to the closest locations. You can say "JFK" and Google will prompt you to navigate to John F. Kennedy International Airport. Theoretically, you can say something like "Navigate to BodyWorlds," and if your local science museum has the icky-fascinating exhibit, Google will pick up on it and send you there. Note that this also works if you say "Directions to," which brings up the standard Maps directions instead of the turn-by-turn Navigate.

However you launch Navigation, the app wants to make sure you've enabled a GPS connection when you start it. If you haven't, you'll be brought to the Settings screen to tackle that. If you launched Navigation from its own application icon, you'll be asked to type in or speak a destination, or pick it from your contacts, Starred Items (see how useful they are?), or recent destinations.



Navigating with Nearby Restaurants, Parking, etc.

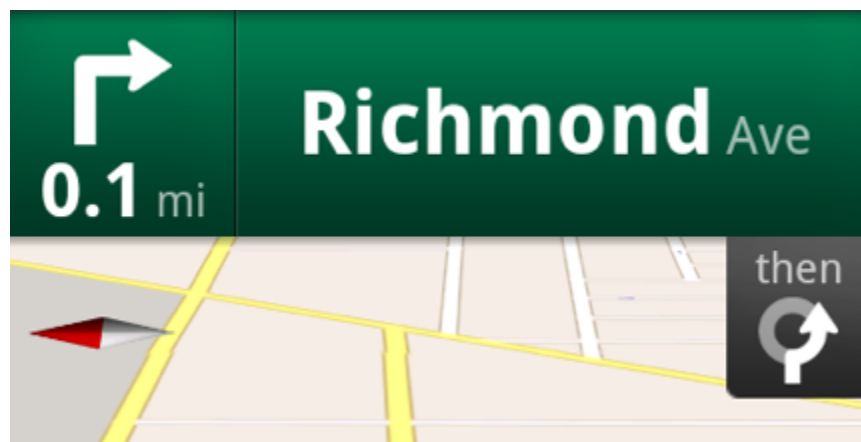
When you're driving, Navigation arranges itself so all the information you actually need to know right now—what you're doing next, in how far, and how much time is left in the trip—is made big and easily seen at a glance. As you approach each turn, Navigation's computer narrator speaks the suggestion out loud: "Turn left on X drive." Then again, you might hear nothing—Navigation seems to, in the latest version, align its volume with whatever your system volume is set at. If you're frequently setting your phone on vibrate, you may have to hit your volume-up button to raise the volume of the Navigation narrator.



Night Mode

It's worth noting that, when using Navigation after sunset in your location, you'll get the "Night Mode," which reduces the number of streets shown and inverts the colors to make your directions more clear.

Find Out Way More About Your Route



Your current/next direction is in the Top Bar

The very top shows what you're doing now, or will be doing very soon, like staying on a route, turning right or left, etc., with mileage, exit numbers, or next road numbers displayed. If there are two directions in quick succession, Navigation will add a little thumbnail hint on the right-hand side as to what happens next. You can also

tap on the top bar to bring up a Maps-style, click-to-advance preview of upcoming turns, which we'll detail in just a bit.



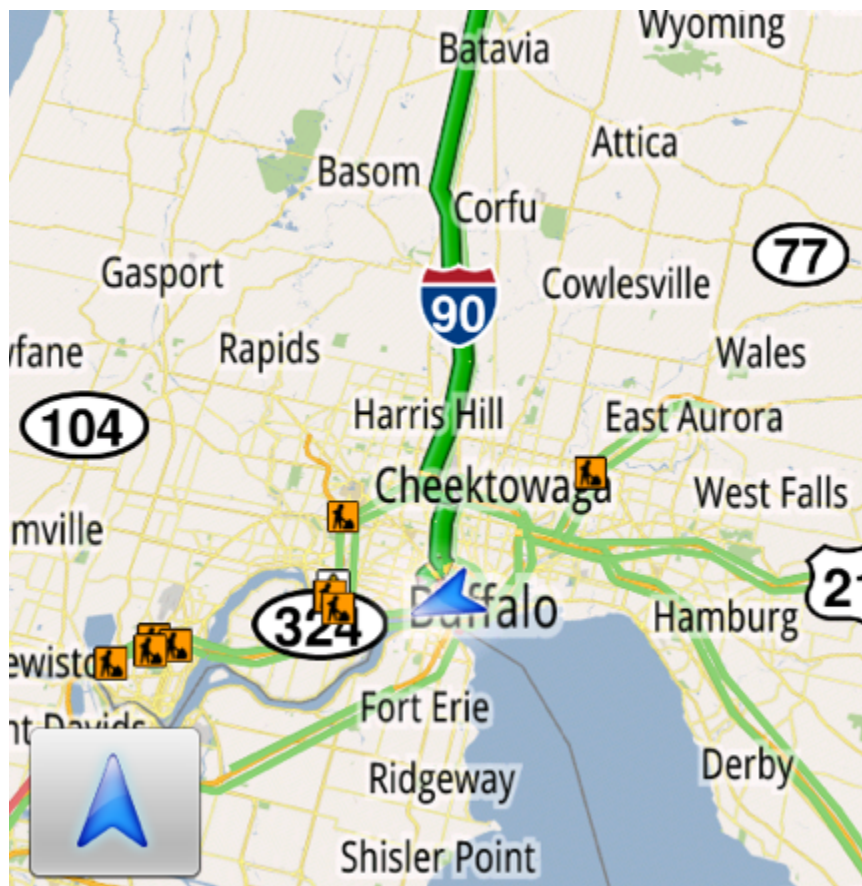
Main Map Screen

The main map screen shows your progress in a three-quarter overhead view, with your anticipated route in blue and your current location marked by a bold blue arrow. Zooming in and out is handled automatically: farther out when you're speeding along, closer up when you're on slower streets. If you have any Layers enabled, or have run a search to show certain points in particular, they'll show up here. If you've scrolled away to check out something, you'll see the big blue Navigation icon in the lower-left. Press it, and you'll zoom back to where you are.



Bottom Time/Road Location Bar

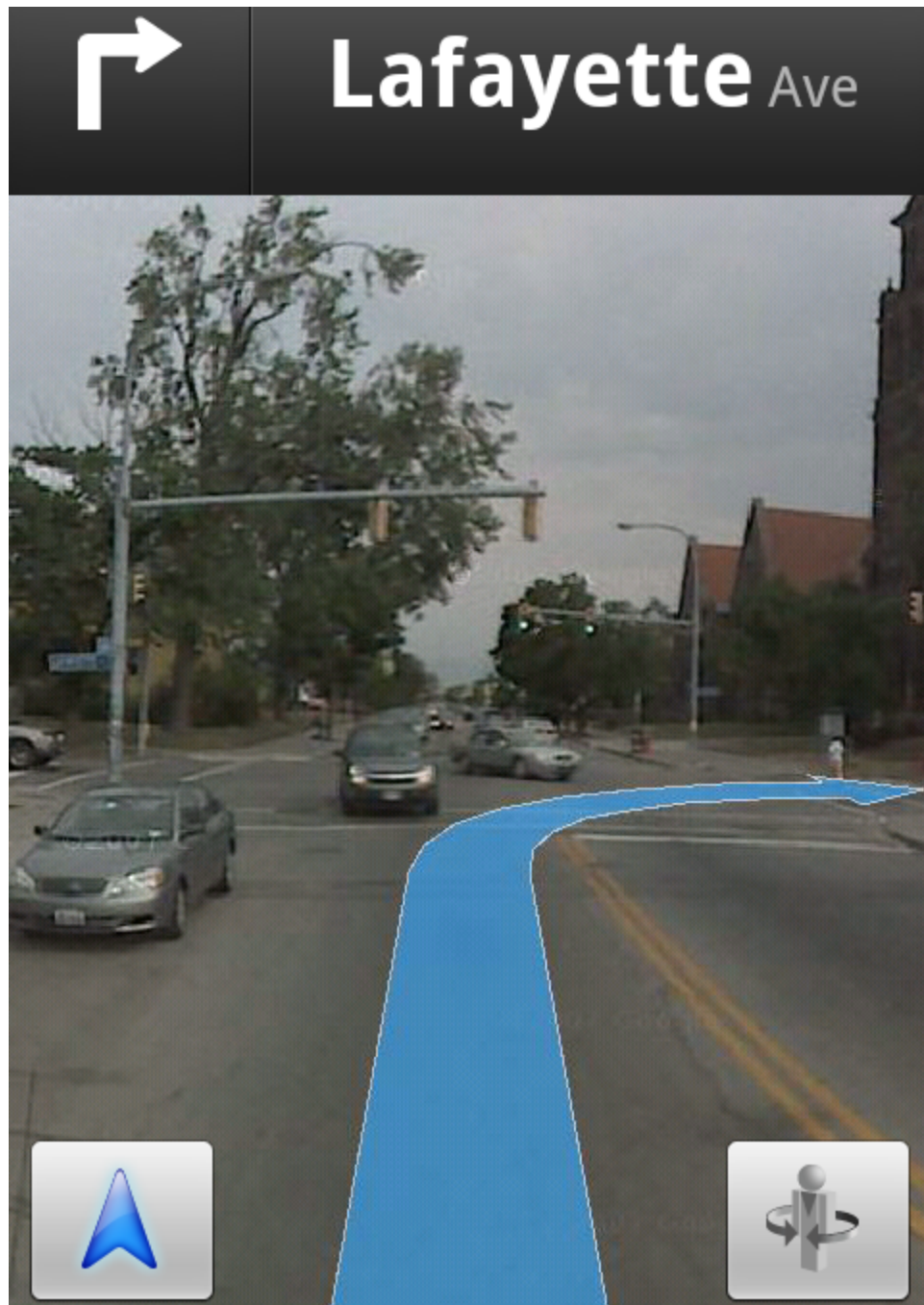
The very bottom shows how much time is left in your route, along with the road you're currently on (though I've blocked that out for privacy in this screenshot). Notice the tiny light to the left of the countdown timer? It's telling you about the traffic outlook for the rest of your trip. Green is good, red is bad, and if you click on the time or light, you'll get a full view of the traffic outlook, with road highlights and markers for construction.



Press the Top Bar to Activate a Step by Step Map Mode

As noted above, pressing on the top bar with your current action in large text, activates a step-by-step mode that will seem familiar from Maps, the difference being the perspective. Arrows will show up, and you can press them to get a preview of what you'll be doing next. This is helpful when you've got some time before you head into a city during rush hour, or other situations where you don't know the terrain.

So that's a pretty helpful close-up view of what's going on up ahead. Even more helpful? Hit the Street View icon, and you'll see exactly what you're supposed to do—on a real street picture:



Street View Preview

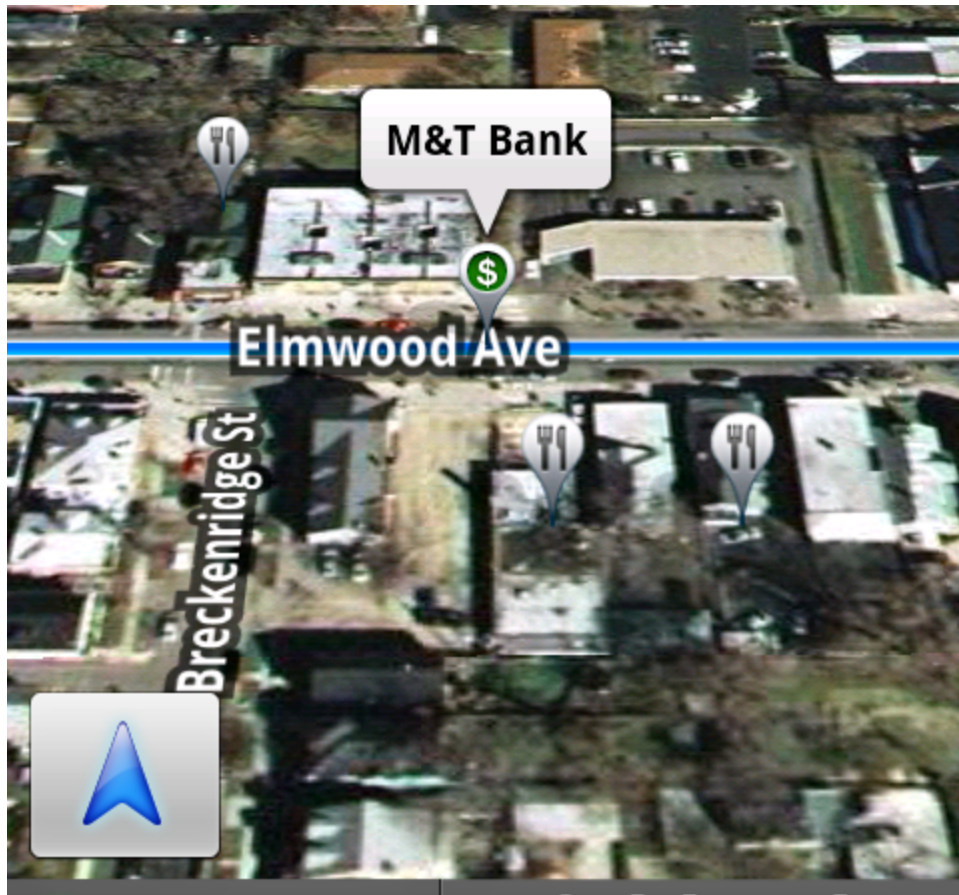
Actually, that's just a Street View *preview*. Click that cute little "Street View Man" and you'll get full access to explore where you're going to be turning—though, really, it's someone else who's not driving who should be looking this up.



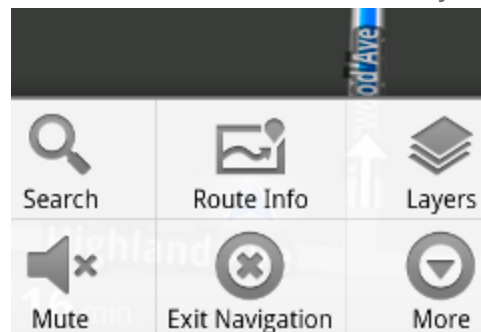
Street View

Search and Layers

Like Maps, Navigation can also show you "Layers" of content while you're driving along, including views of traffic, a "Satellite" mode that switches from simple maps to aerial pictures, and can also show banks, restaurants, and other car-friendly spots. Hit the Menu button while in Navigation, and you'll see an option for Layers, among others.

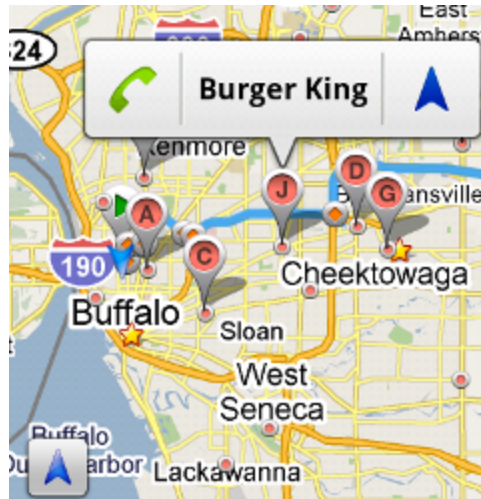


Bank, Food, and Arial Picture Layers



Navigation Menu

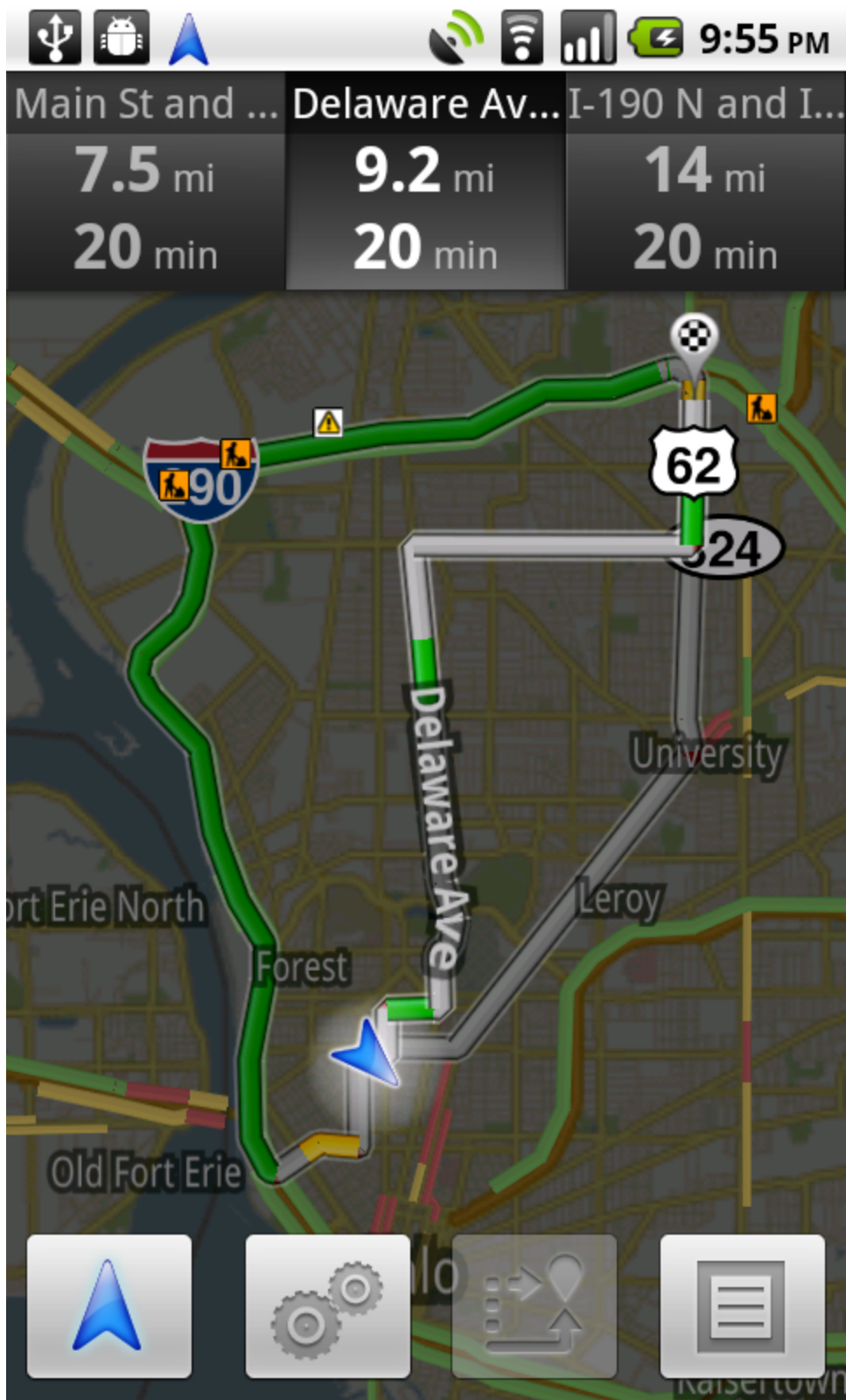
What else lurks in the Menu offerings? "Exit Navigation" and "Mute" do what you'd guess, and "More" offers some helpful stuff—including a direct path to changing your destination while inside Navigation.



Taking a Detour with Navigation

"Search" does something pretty great. Rather than just pulling up a result and offering to get you there, it puts anything matching your search term. So if you needed to find a shoe repair spot on your cross-country trek, just search out "shoe" or "footwear" (or both, actually), and you'll see every point along the way. If you click one of the results, Navigation will get you there, then get you right back on your trip. Or you could just find some fast food.

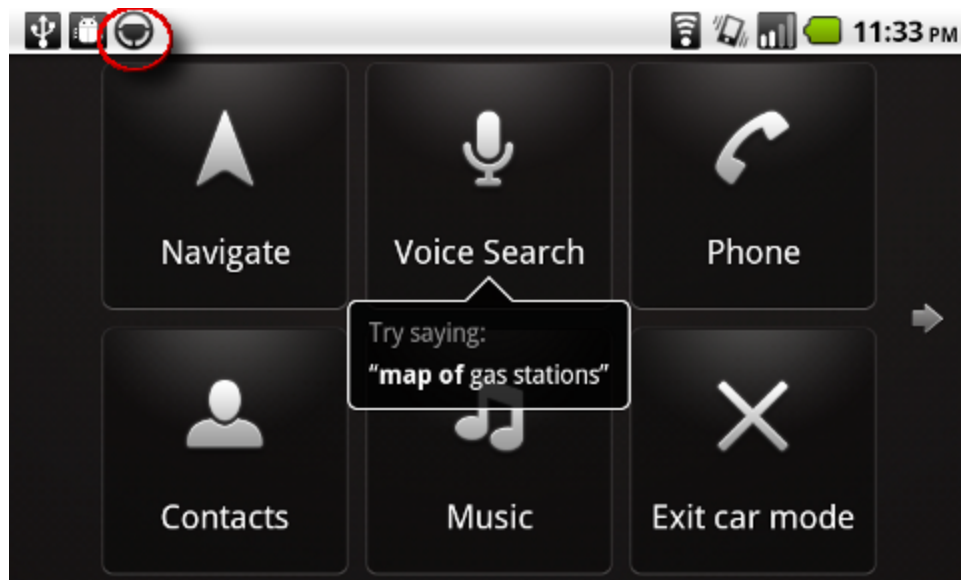
Pick a Different Route



Choosing Different Routes

"Route Info" is also misleadingly simple, as it's more about route control. You get a big, traffic-colored overview of your trip. Hit the gears-style icon to access the "Avoid Highways" and "Avoid Tolls" options. The third button with the arrows and marker? That lets you choose which route you'll take. Google doesn't always have a host of options, but you can sometimes augment Google's raw data with your own knowledge that, for example, you never want to drive past the elementary school shortly after 3 p.m. To change your route, you can tap one of the gray-and-colored routes on the map, or select from the columns up top listing the main roads taken for each.

Car Mode



Car Mode

Android's Maps and Navigation tools are pretty darned handy, but getting to them while you're driving requires pressing small icons or fiddling with controls you shouldn't be fiddling with in a moving object. That's what car mode, or "Car Home," is for. If you bought an accessory car dock for your phone, Car Home should launch automatically when you slot your phone into it. Otherwise, you pull up the "Car Home" app in your app tray.

The layout and button options are made for driving—big buttons, an emphasis on voice search. Rather than punching up a contact and dialing it, you should hit "Voice Search" and say "Call Tim Bronson at Home" to start a call to the number you assigned to. There are links to your music, a phone dialer, and a few other apps on a screen you can swipe over to. But the main feature of Car Home (starting in Android 2.2) is that it stays up. If you hit your Home or Back buttons, you end up back at Car Home, not the Home Screen. The way out is to hit the "Exit car mode" button, or pull down your Notification bar and select the little nub that informs you that Car Home is running.

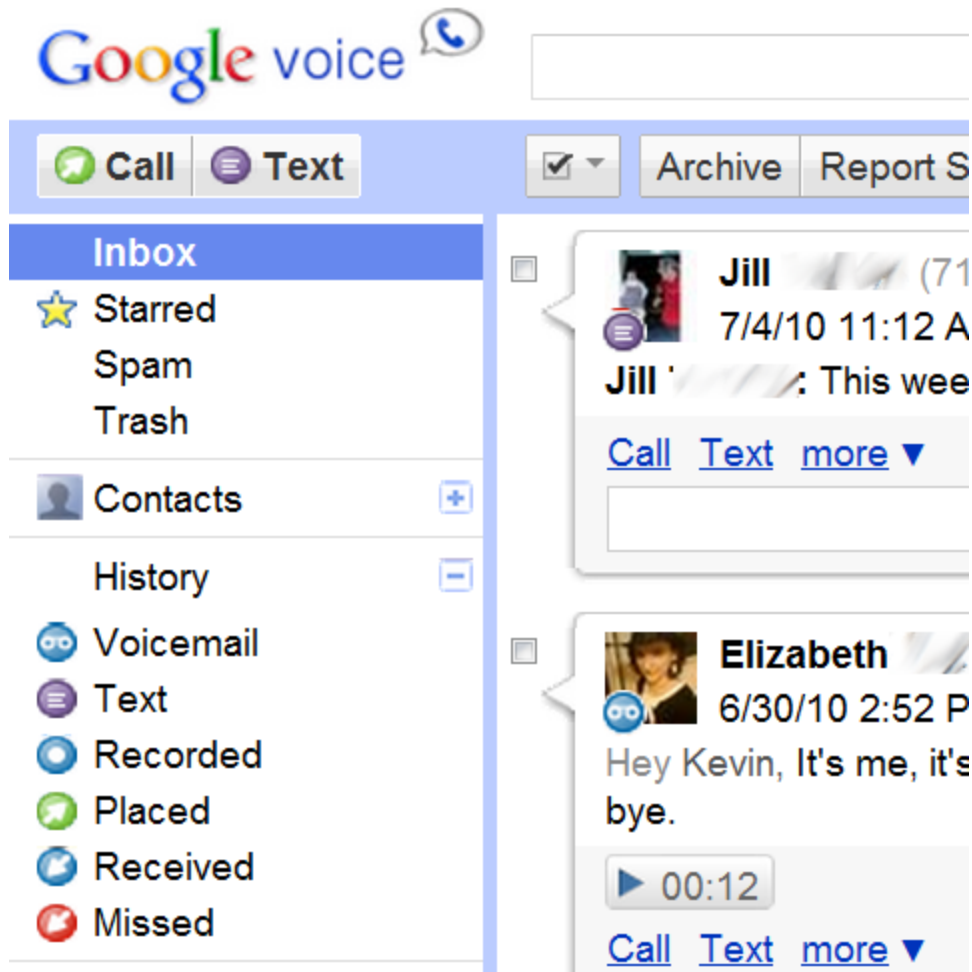
Maps and Navigation are some of Google's most frequently updated apps, so always be on the lookout for new stuff when you're looking for directions or neat stuff nearby.

Google Voice

[Google Voice](#) is many things, and all of them are potentially great. With an Android phone, you've got the best possible Google Voice experience in your pocket.

A Google-made Voice app is installed by default on most modern Android phones, and it can plug itself into your phone in very tight, elegant fashion. Tap it for the first time, and you'll be asked to activate the service on your Google account (or another account, if you'd like). Once your Google Voice account is activated and connected to your phone, you can do a lot of really neat things, depending on which route you take.

What You Can Do with Google Voice



Google Voice

Google Voice offers two plans: one in which you take on a new number in an area code you choose and use that number for all your voicemail, phone calls, and SMS, and another that lets you keep your established numbers, but use Google's services for voicemail. Either way, you'll benefit from setting up Google Voice and using it on your phone.

Using Google Voicemail (Keep Your Number)

- **Voicemail you can listen to, download, or read and search through.** Google's servers listen to your voicemail (robot-style

and anonymously), transcribe it to text, and offer it up for you wherever you'd like it. Need to find the message where Aunt Clara mentioned Oregon? Simply search your voicemail transcriptions to find it.

- **Custom voicemail greetings** depending on who's calling. Unknowns and possible business contacts can get the more formal greeting ("Hi, you've reached... I'm not available, but..."), while a select group of friends get the real you ("Hey, it's... You know what to do.")
- **Email and SMS notifications for new voicemail**, so you can get the gist of what's being said without having to actually listen, or treat your voicemail just like your email. If you're a Gmail user (and, being an Android owner, you likely are), you can even play back messages and mark them as listened to from your inbox.
- **Cheap international calling** offered by Google. It was 7 cents a minute to call Zambia at the time of this writing, and 62 cents a minute to call Tuvalu—an island nation that's halfway between Hawaii and Australia, and has no television stations and one internet provider.

Using Full Google Voice (Change Your Number)

If you go for the full-on new number of Google Voice, and have some or all of your contacts start using it, you get a lot more:

- **Free SMS**, both from an internet browser and through your Google Voice app. That's right—cancel your unlimited plan and send and receive all the texts you want—with one or two hitches, discussed below.
- **One number to (selectively) ring your phones** so that your business line rings during business hours, your home phone on off-hours and weekends, and your cellphone at all other times. You can even switch between phones on the fly, so you can

change from the cellphone you had walking in the door to your more comfortable home phone when you're sitting down.

- **Call screening** for conversations you want to send straight to voicemail or avoid entirely. You can have Google Voice ring you and announce the caller's name for those you've never called before, and even listen in on the voicemail as it's being recorded. For the really annoying telemarketers, you can mark them as "spam," just like email, and they'll always get ignored.
- **Call recording** by simply pressing "4" during the call (on incoming calls only, for the time being). When you stop recording (press "4" again) or end the call, the recording shows up in your Voice inbox, just like a voicemail, with an easy option to download it as an MP3 file. There's a very notable announcement by Google to comply with call recording laws across all states.
- **Free VoIP calling**, if you're geeky enough to set up a SIP software or hardware package on a home phone or your computer desktop. I outlined one method at Lifehacker that [uses SIPgate software](#), but Google will likely have its own software or web site solution on its way.

Signing Up for Google Voice

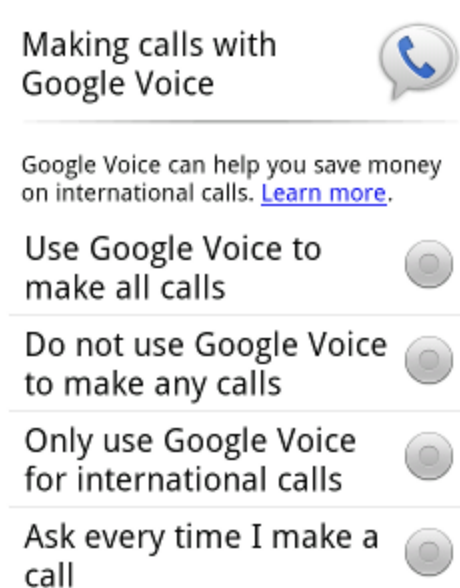
You've already got a Google Account from setting up your Android phone, so setting up a Google Voice account won't be too hard.

Head to google.com/voice from a standard computer browser, then click the big blue "Try it out" button on the right (or something similar). You'll be asked to sign in with your Google Account, then given the choice detailed above: Google Voice with just voicemail, or the full Google Voice number change. If you pick the former, lighter option, you'll be walked through setting up Google Voice with your phone and forwarding your voicemail to go to Google, though you can skip this on your cellphone, as the Voice app can likely handle the technical details itself. If you pick the latter, you'll be walked

through picking out a new phone number in your area code—you can even search to make it spell out something you and your friends can remember (241-LIAM, 58B-ILLS, etc.) In both cases, Google will likely need to call the phone you're setting up and have you type in a verification code, so have your phone handy.

Setting Up Voice on Your Android Phone

Head to your App Tray (or, as you might remember, your search bar) and launch the Google Voice app, simply called "Voice" in most cases. You'll get an introduction screen, and if you have more than one Google account set up on your phone, you'll be asked which you want to use to connect to Voice with (in most cases, this is your personal account).

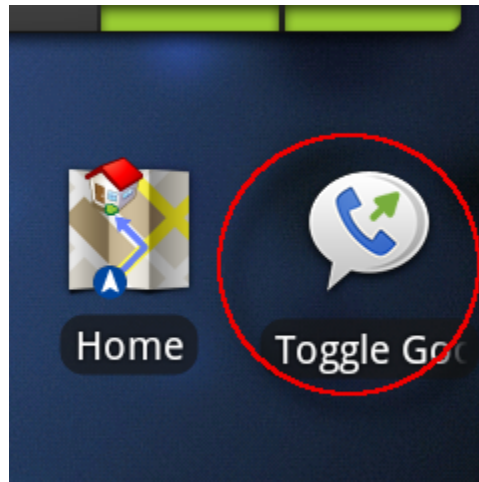


Google Voice Intro Screen.

If you're using a full Google Voice plan with a dedicated number, you'll be asked how you want to use Google Voice with your phone. The options are likely a bit confusing to newcomers, so we'll briefly explain how Google Voice connects your calls:

- Using your Android-powered Voice app, or the Voice web site, you send a message to the Google Voice servers indicating that you'd like to make a call, what number to call, and what phone line you'd like to call from.
- The Google Voice servers verify the number you're dialing, then reach back and connect to your phone. When you're using the Voice web site or most other tools, your phone will actually ring and you'll have to pick it up. With the Voice app on Android, the call is connected automatically (though there's still a short wait between calling and hearing a dial tone).
- Connected to Voice, you start ringing the other number. On their caller ID, they see your Voice number. If they pick up, you're now both talking through Google Voice's servers—they're using advanced [VoIP technology](#), or, in layman's terms, running a huge internet-to-voice, Skype-style system.

Whether you connect with Voice or not, you're still using your actual cellphone voice connection, so Voice won't save you cellphone "minutes"—unless you're using a handy little billing trick, detailed further down. The difference is in the number others see when you dial, and whether your call routes through Google's servers. The main reasons, then, for picking options other than "Use Google Voice to make all calls" are for those without data plans who are frequently away from Wi-Fi, or for those using Voice only for voicemail and cheap international calls.

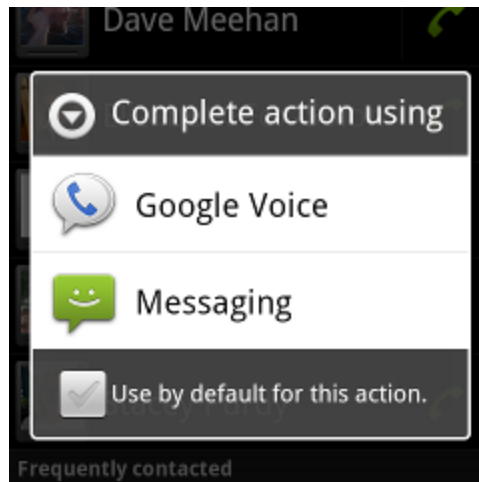


Toggle Google Voice to pick up your missed calls.

If you're not quite sure how you want to use your Google Voice number right away, not to worry—there's a quick shortcut toggle you can keep handy on your home screen. Press and hold on an empty spot, select Shortcuts, then pick "Toggle Google Voice." Each time you press the toggle, a screen announcement will show what mode you've just changed to: All calls, No calls, International calls, or Ask each time.

Next up, Google Voice will offer to configure your cellphone's voicemail settings, so that all missed calls go to Google Voice and using your phone's voicemail number connects you to Voice. You can skip this process with a button if you've got a particular setup in mind, but otherwise, you'll only have to click one option to choose Google Voice as your voicemail provider.


After that, you'll be finished with Voice setup. Note that Voice most often *will not launch* right away, and that you **need to open the app manually** before your settings for calling and voicemail are put into place. So go ahead and launch Voice.




Google Voice Option

Google Voice and MMS After setting up the Voice app with your account, you'll get an option the next time you go to SMS somebody—use Google Voice, use Messaging, or set one of the two up as a default. In my case, I set up Voice as my default, because it's the number I give and call everyone from. If you send a lot of messages with pictures or other attachments, though, you might want to keep Messaging in the mix, as Google Voice doesn't handle MMS (multimedia) messages well—as in, not at all. You can always launch Messaging manually from your App Tray, but if you're all about the MMS, you don't have to pick Voice as your default.

Using the Voice App


Inbox (0/4)




Dave

7/6/10

★

Hey Kevin, I just got home and hey, you're not. 6. P. V. D's. Is there a she's going to work, so give me a call here at




Elizabeth

7/6/10

★

Excellent. I have a doctor's appointment at 3:30 and then i'll be home




Jill

7/4/10

★

This week,s
The mike birbiglia story on TAL this week is pretty much gold.









Amanda

6/11/10

★

Ohh, Hi Kevin, just trying to reach your mom just to say that the woman who couldn't connect with you. Room we

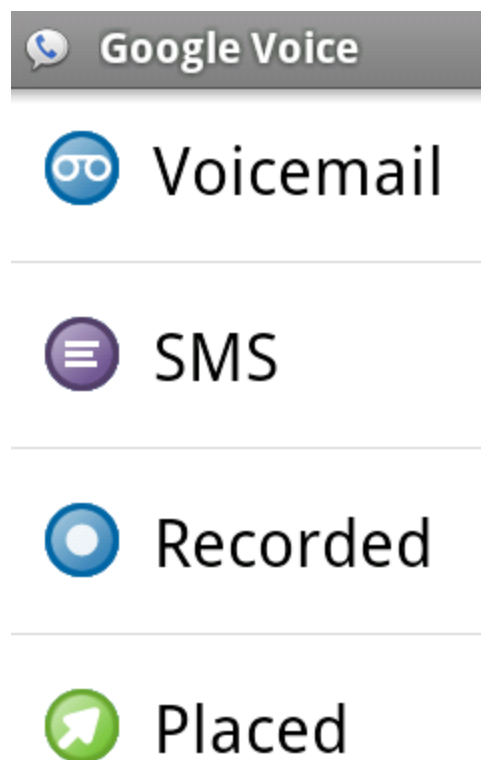
 <p>Compose</p>	 <p>Refresh</p>	 <p>Labels</p>
 <p>Balance</p>	 <p>Settings</p>	 <p>Help</p>

Google Voice Inbox; Voicemail, SMS, and phone recordings

Right when you launch Voice, you see your Inbox. It's a combination of your voicemail, SMS messages, and phone recordings, and you

can open them, archive them, or delete them, just like email. Long-press on any of the messages, and you'll get a full range of contact options—view their contact, call or SMS them, archive or delete the message, mark it as unread, add a "star" for later finding, or mark the call or voicemail as "Spam." Just like your Gmail or Email app, marking a message as "Spam" means that Voice won't accept calls from that number again, and may warn other Voice users about that number.

Hit the Menu button, and you'll get a few options: "Compose," to write a new SMS (though you can also launch SMS messages from the Contacts screen); "Refresh" if you think the app is lagging behind; "Labels" to get at specific filters like Voicemail, Text (SMS), and your archives; "Balance" to check your international calling credits; "Settings" for deeper configuration (we'll detail the options, per usual, further on); and "Help," which drops you into Google Voice's web help pages.



Google Voice Labels

"Labels" is an area worth at least one more look. Along with seeing just voicemails or SMS messages, you can also look at your history of calls made through Google Voice—recorded, placed, received, and missed. One nice thing about calling through Voice is that your call history is always backed up online, and while you don't have searching powers in the Voice app, you can still see who called you when, no matter what phone you were using, if you stick with your Voice number.

Reading and Listening to Voicemail



Voicemail

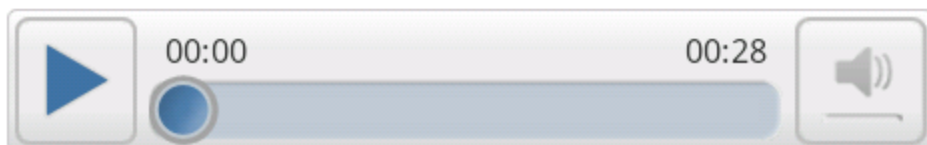


Amanda

(585)

Received: 6/11/10 10:59 PM (27 secs)

Ohh, Hi Kevin, just trying to reach your mom just to say that the woman who couldn't connect with you. Room we tried a couple times. I kept saying Google. I didn't know your room number but I can't sing can connect is Stacia Kevins room and then she was in. I don't know didn't go through, so it's a 10. They had that maybe it has a cellphone. Alright, I'll talk to you later. Bye.



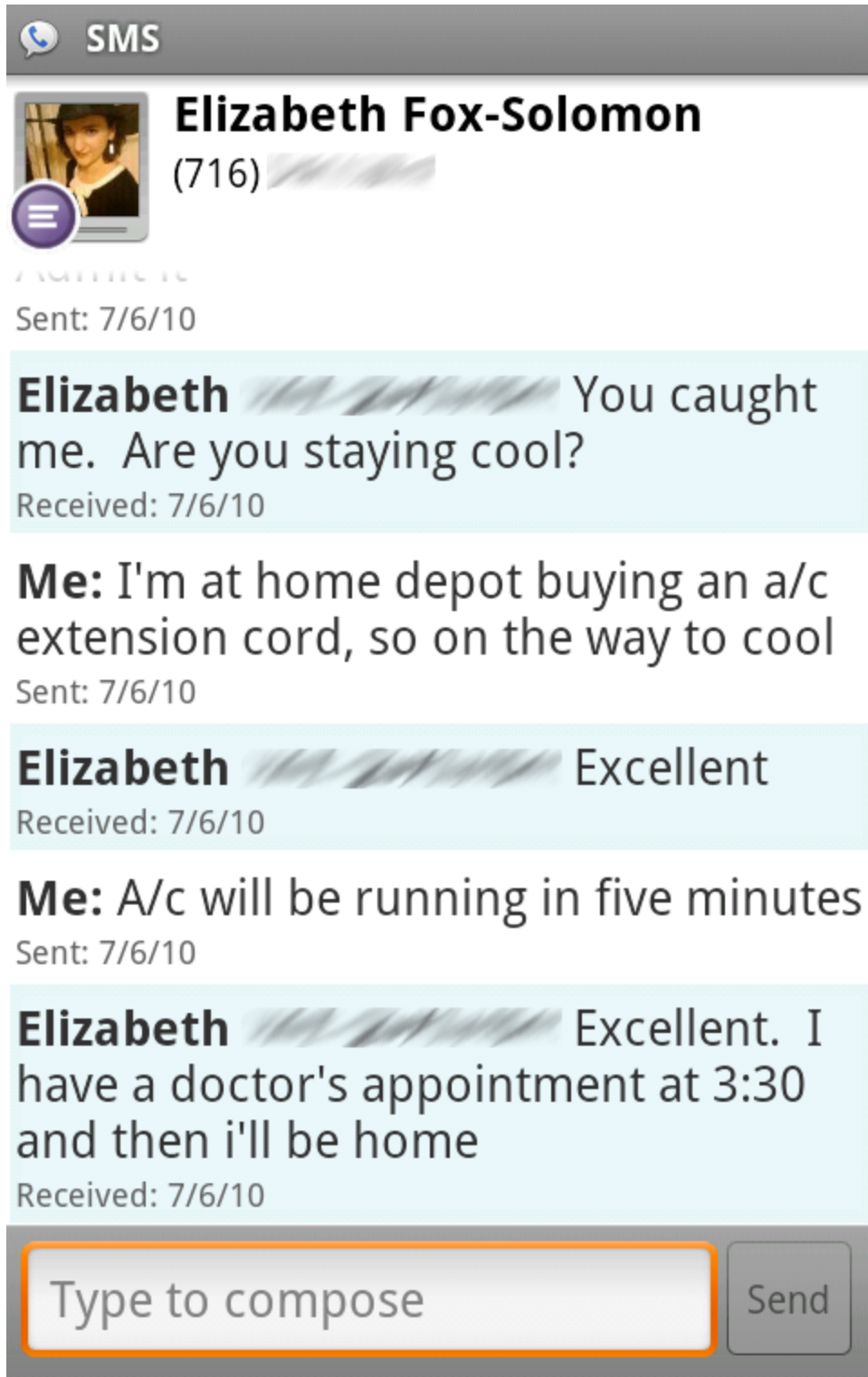
Voicemail Screen

That icon or image in the upper-left corner? Just like anywhere else on your phone, you can tap it to bring up a sub-menu of contact options—email, call, SMS, and the rest. After the details on the sender, phone number, and message time, you'll see a transcript of what Google *thinks* the caller said. Once in a great while, you'll get a "Transcript not available" message if you're checking soon after the call, or if it was mostly unintelligible. In most cases, though, Google gives the call its best shot.

Notice the different shadings of gray and black in the words? The more sure Google is of the word it caught, the darker the text. So light gray words are Google admitting it could very well be off, while dark black text seems like a lock. In the example pictured here, my sister called to say the desk couldn't connect her call to my hotel room. The pacing and punctuation are off, but you can see the gist of the message gets through in the text. An "uh, well..." verbal tic turned into Google somehow but, hey, progress! You can see for yourself how well Voice's transcription does—as you play back the message, the word attached to the current audio is highlighted in red.

At the bottom are basic player controls—a play/pause button, a marker you can move to "scrub" through the message, and a switch button on the right that changes between playing back on the earpiece for private listening, or (when lit) the speakerphone. Hit the Menu button, and controls pop up for calling or SMS-ing this voicemail sender, viewing their contact details, adding a star or archiving the message, and a "More" option with "Refresh" and "Delete" options.

SMS Messages

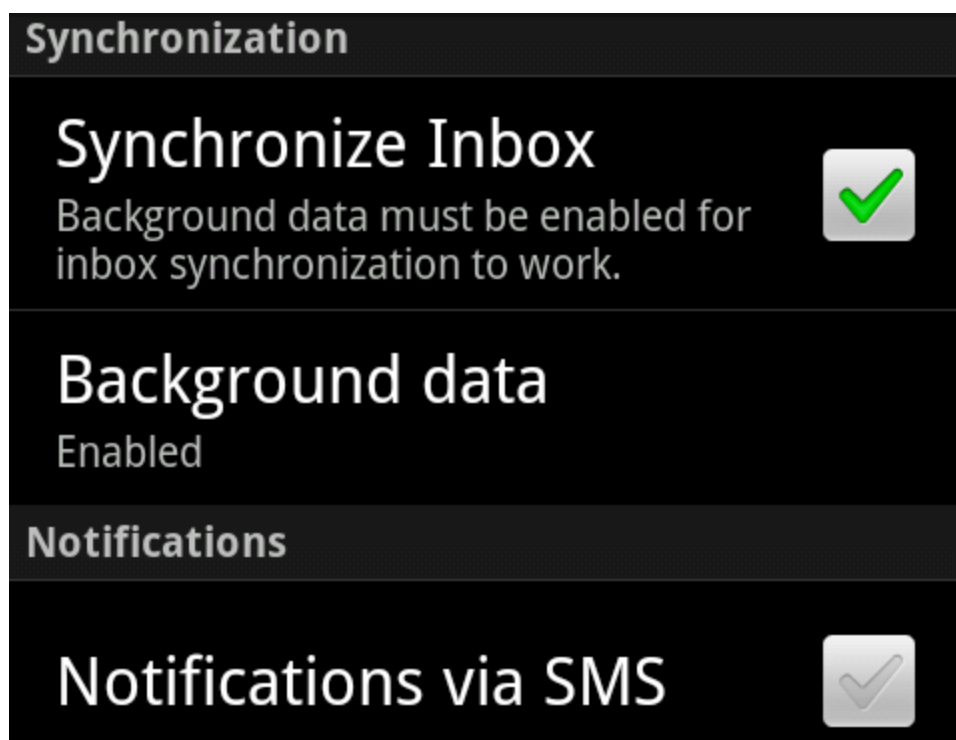


SMS with Google Voice

Opening an SMS message shows a simple back-and-forth, chronological record of an SMS conversation. Press and hold on a

particular message if you'd like to copy its text, or get a more specific timestamp on its sending. The Menu button options are the same as with a voicemail—call, SMS, view contact, star, archive, or delete. The best feature of SMS in Google Voice isn't on the screen—it's that it's free, archived, and searchable, at least at Voice's web site.

Voice App Settings



Google Voice Settings Menu

Google Voice has a whole lot of settings—not just in the Voice app, but also at your Voice account page. Generally, you set up how you want phone calls and SMS messages routed to all your phones, including your cell, through the [Voice settings page](#), and handle how your Android phones alerts you to Voice messages in these app settings. Let's take a quick run through:

- **Making calls:** Provides the same calling options as you saw at setup: Use Google Voice for all calls, none, only international, or

chosen on each call.

- **This phone's number:** If Voice was somehow confused as to which phone you were holding, you could choose another phone set up in Voice from this menu.
- **Voicemail playback:** Choose whether voicemails play back in the "handset" (generally audible only to your ear) or the louder speaker.
- **Sync and notifications:** This is actually a big sub-category, with more buttons than the main menu itself:
 - **Synchronize Inbox:** Generally, if you get decent data coverage and/or have Wi-Fi available at home and work, keep this checked. It allows Google Voice to use the same kind of instant/"push" notifications to let you know about new voicemails and SMS much faster than with other "cross your fingers" methods (which early Voice/Android users suffered with for quite some time). Underneath the option, there's an item that indicates whether the proper background data sync setting is enabled.
 - **Notifications via SMS:** Voice drops its own notifications into your bar for new voicemail, SMS, and recordings, unless you've turned them off (next item down). If you're heading into no-data territory, or would like a backup notification system for a bit, check this box and you'll get SMS pings.
 - **Inbox notifications:** Turns Voice's own voicemail/SMS notification bar messages on or off.
- **Select ringtone:** Pick a unique tone or sound for Google Voice messages, to distinguish them from email and other pings.
- **Vibrate:** Choose whether your phone buzzes on new Voice messages.
- **Light:** Have your phone's "status light"—usually a trackball, or a tiny LED near the top—blink when there's a new, unread item in your inbox.
- **Sign out:** Unhook your phone from your particular Voice account.

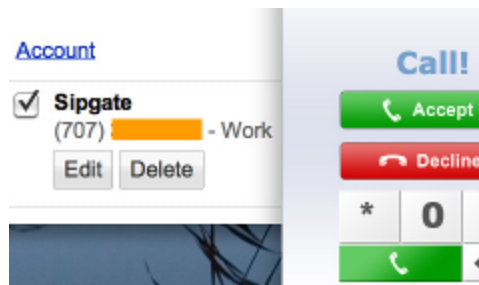
Getting More Out of Google Voice

The more you look into Google Voice, the more you're likely to keep using it. It's a service with a lot to offer, but neither Google, nor certain intrepid authors, can capture it all in a few textual nuggets.

Here are a few quick tips on getting more from Google Voice on your phone and in your phone life.



Add a browser extension for quick desk calling: When you find a restaurant or business phone number you want to call, you don't need to pick up your phone and punch the number in. With a Google Voice extension installed in [Google Chrome](#) or [Firefox](#), you can simply click on phone numbers on a web page, then answer your phone when it rings to make the call. These extensions also offer instant SMS and message checking abilities, making them well worth the download for any Voice enthusiast.



Moving an app icon

Make free desktop calls with Voice:

Your Android handles Google Voice calls just fine. Need to save on minutes, or just like the convenience of headset calling? You can make free, internet-based, Skype-like calls from your computer using free software. I [detailed the setup at Lifehacker](#).

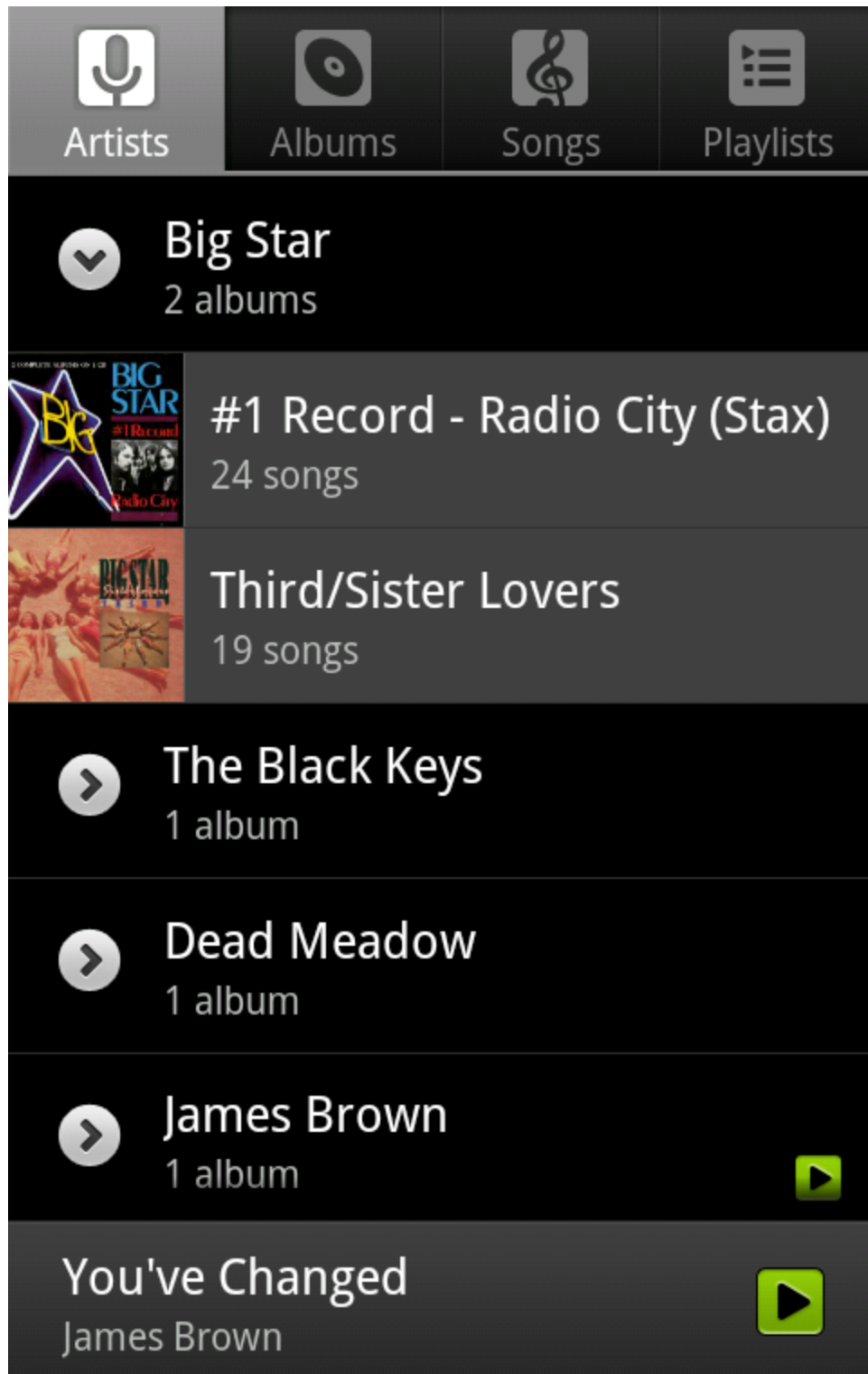
Listen to voicemails in Gmail: In your Google Voice settings (on the google.com/voice web page), you'll find options to have your voicemail messages sent to an email address (and SMS, too, though that can be a bit overwhelming). If you're a Gmail user, head to the Labs section of your Gmail settings and search for the "Google Voice Player in Mail" lab. Click Enable, then scroll up or down to find the Save Settings button. Now when you get a new voicemail, you'll get an email that you can listen to, and Voice will mark the message as read/listened to when you do.

As you can see, your author is more than a little geeked out about Google Voice, and prefers it to what seems like the old-fashioned voicemail and SMS systems that are the default on most phones.

Music & MP3 Stores

Note: If you haven't already, check out the tutorial on "Moving Music, Pictures, and Other Files On and Off Your Phone," which addresses how to get your music on and off your phone's SD card, where it's played from.

The Music App

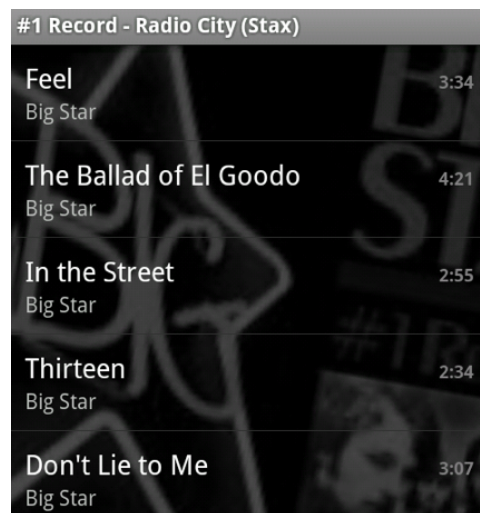


Android Default Music App

The Music app on Android is probably the most straightforward on the phone. That can be a good thing, but music player preferences

are also highly personal. It's not an iPod-like experience, but it's similarly straight-ahead and, for those who just want to hear an album, playlist, or set their tunes to shuffle, it gets the job done.

By default, Android can play MP3, Apple-style AAC, and Ogg Vorbis songs, and recognize the tags, or “metadata,” placed on them by most music stores and music organizers like iTunes. The app starts off in a view of all the artists of the music you've loaded onto your phone's SD/microSD card, utilizing that metadata. Click an artist, and you'll see the albums represented in your phone collection. If you'd rather see your music grouped by albums or songs, click one of the two middle tabs at the top. If there's something playing, or recently playing, you can access it quickly by pressing the bottom bar with the song name.

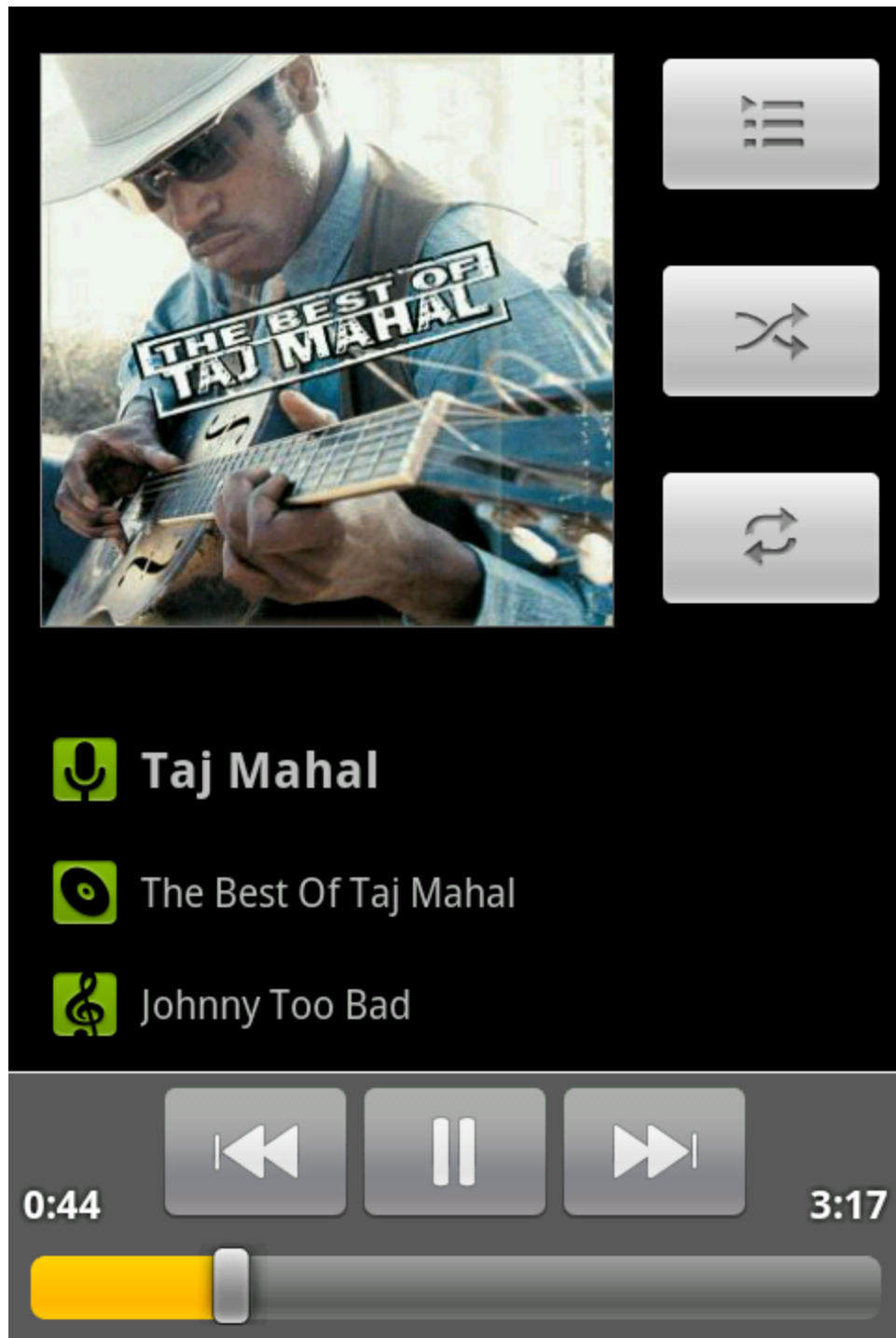


Browsing album tracks.

Click through to check out the songs on an album, and the background will change to a stylized, black-and-white zoom from the album art--neat, eh? Press and hold on any song, and you'll get options to play, add it to a playlist, delete it, or search for it--on YouTube, Pandora, on the web, or in other apps you're using. There's also a "Use as ringtone" option, but it's quirky--your default ringtone is immediately set to that song, and there's no way to edit

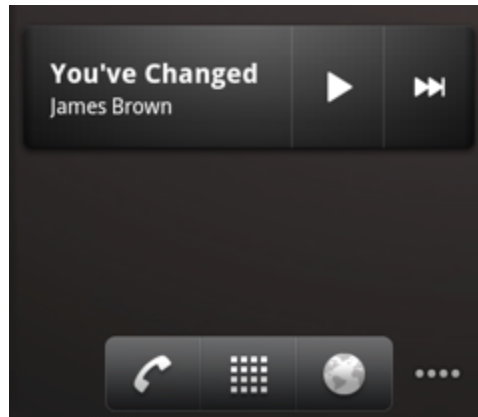
the portion of the song used. If you'd like to turn music into ringtones, check out the [RingDroid app](#).

The "Playlists" tab keeps a "Recently Added" playlist going by default, but you can create your own playlists by pressing and holding on a song, choosing "Add to playlist," and choosing "New" when asked for the playlist. Some music-syncing desktop software, like Songbird or doubleTwist, can also create and manage your phone's playlists through syncing.



When a song or playlist is playing, the Music app changes to a pretty simple interface. The buttons in the upper-right show your playlist, or turn on shuffle and repeat modes (from the top down). Album art and information are shown (and you can search any of them out by pressing and holding on them) three player buttons are offered for

playing, pausing, and skipping back or forward, and you can “scrub” inside the song by dragging the slider bar or tapping along the timeline.

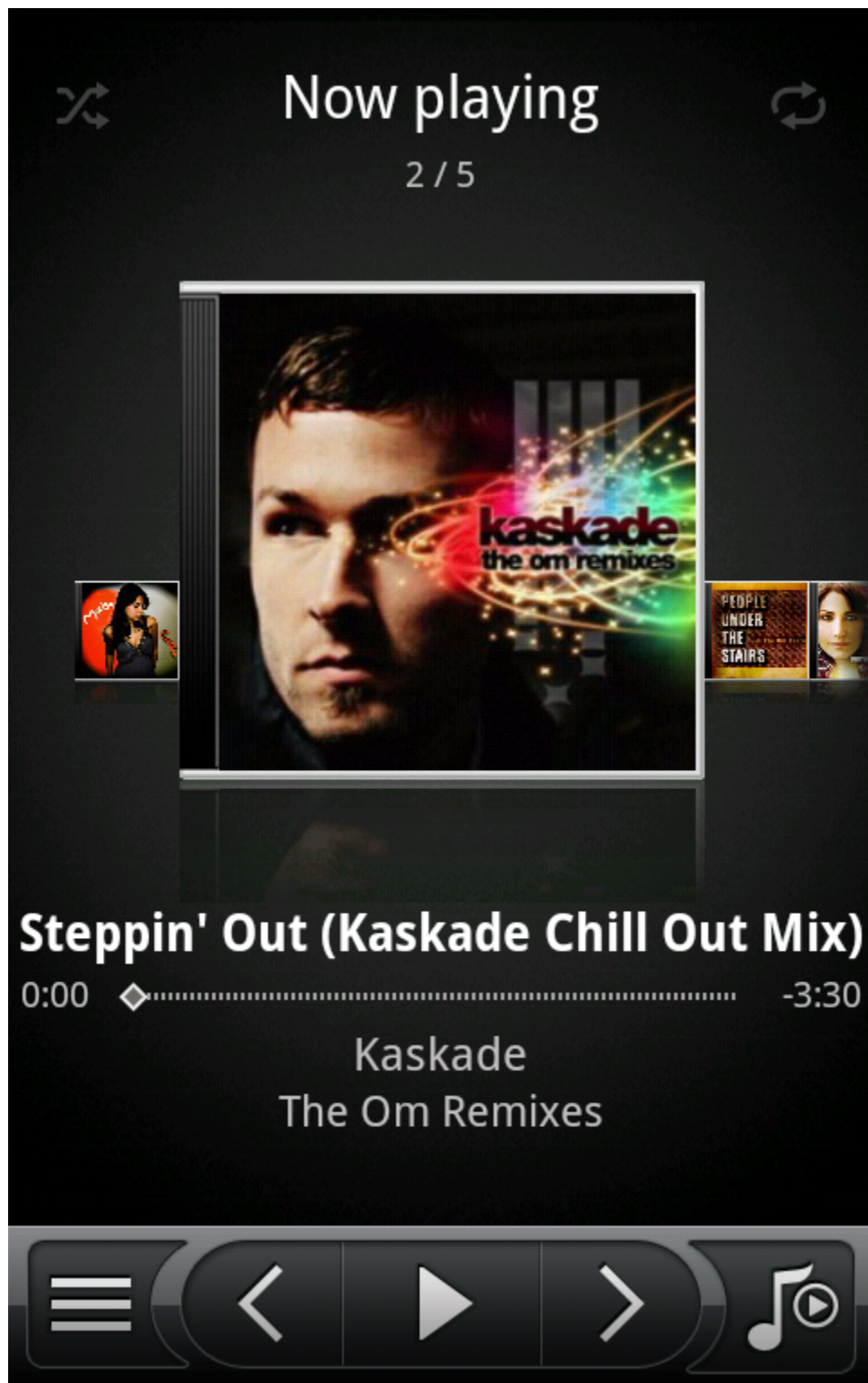


The Music player widget.

At most any place in the Music app, you can hit your Menu button and choose “Party Shuffle” or “Shuffle All” to skip the playlist process. You can also minimize the player at any time with the Home button and your tunes will keep playing. You can get back to your Music app by pulling down the notification bar and clicking the entry it will keep there, or by adding a Music widget to your home screen and using its buttons. If you’ve got a playlist you particularly like, you can create a shortcut to it on your home screen, too, by pressing and holding, choosing Shortcuts, Music playlist, then picking the playlist you’d like to work into regular rotation.

Depending on your phone model, you may also have received headphones that have player control buttons on them; you can use these to control playback without having to turn the screen back on.

HTC and Motorola Music Apps



HTC Music App

Motorola's phones have a Music app that hews pretty closely to the stock Android app. HTC, as always, gives the Music player a new coat of paint, with some helpful new features added, too. You flip through albums as in iTunes' Cover Flow mode--that is, as if you were flipping through a horizontal CD rack. From the Menu button, you can do all the same things as in the stock Music app, but also Share a track through your Bluetooth connection. That's mostly helpful for sending a song to a laptop computer with Bluetooth connectivity, but it's a bit slower than your USB cable, too. The Music widget is also a bit more flashy, and fits in with HTC's general widget style.

The Amazon MP3 Store



Bestselling Albums



Bestselling Songs



Browse By Genre



Free Song of the Day

This Orient

Foals



(4:02)

FREE





Amazon MP3 Store

Need to bolster your music selection on your phone? Most Android phones come with an Amazon MP3 store pre-installed, and it's available in the Market for phones that lack one. Amazon's MP3s are a smart fit for Android phones--you can copy them to, and play them on, as many devices as you'd like, and songs and albums are generally a bit cheaper than through Apple's iTunes Store. It's fairly simple to use, too.

On the main screen, you'll see a search box, links to the lists of bestselling albums, songs, and genre charts, links to the free MP3

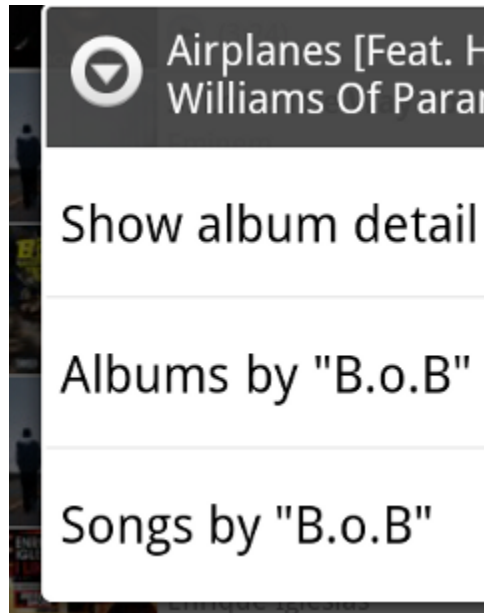
song of the day, and the album deal. Click the orange “Free” button to grab that free song, or hit the orange price tag on the album and it turns into a green “Buy,” with one more click to actually purchase the album.

Amazon MP3 (US) - Bestselling Songs

	4. Airplanes [Feat. Hayle... B.o.B ▶ (3:01)	\$0.99
 :24	5. Love The Way You Lie [...] Eminem	\$0.99
	6. I Like It Enrique Iglesias ▶ (3:52)	\$0.99
	7. Hey, Soul Sister	

MP3 store main screen

Amazon’s MP3s each offer a 30-second preview, which you can listen to in the view of any album or song list by clicking on the album art in the left-hand column or the song name. Clicking the price on the right brings up another “Buy” button.



Album Details

Press and hold on a song or album, and you'll get a context menu offering to show more about the album, or see a full list of songs and albums offered in the store from that artist.

Pressing the Menu button at any time gives you some basic options-head back Home, make a Search, see your Downloads, or get Help. If you don't have an Amazon account (and if not, hey, welcome back from Siberia), you can sign up for one through this Amazon MP3 store.

Alternative Music Apps

As you might have noticed, the default Android music app, Music, doesn't exactly blow us away with features or flash. Luckily, the Market is full of interesting replacements. For a peek at some full-featured alternatives to the default Music app, check out the "App Alternatives" feature.

Taking and Browsing Photos



Image Gallery

The camera on every Android phone is different in its capabilities, and the software that powers that camera is usually a bit different, too. We'll walk through three examples of how the camera software can function, then show you how to get photos out of your camera and onto your computer, into email, or onto the web for your friends and relatives to see.



Nexus Camera View

If you haven't already, we highly recommend reading the chapter on "Getting Music, Pictures and Other Media On and Off Your Phone." It covers the basics of plugging your Android phone into your computer by USB and getting access to the microSD card mounted inside.

Taking Pictures



White Balance Options

Some Android phones will have a dedicated "camera" button, usually on the lower-right side of the phone as you would normally hold it. When you hold the camera sideways, therefore, the button is right where your right finger is used to feeling for a shutter button on a traditional phone. Some phones, like the EVO 4G, don't have a dedicated camera button, so you simply use the "Camera" or "Camcorder" app shortcut to access them.

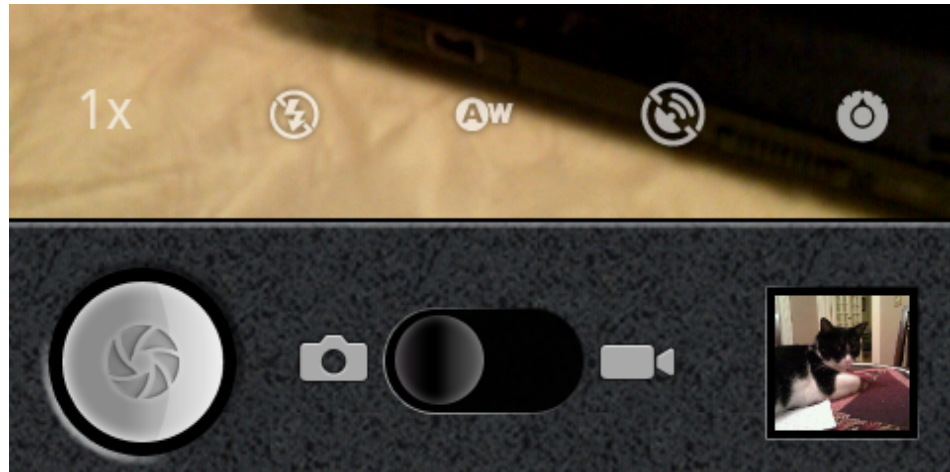
When your camera is activated, the screen becomes a combination of viewfinder and control panel. On the Nexus One running the standard Android (2.2) Camera software, pictured above, the shot preview takes up the left side of the screen, and the controls are packed over to the right. In most cases, for most shots, you don't need to touch anything—your camera will automatically focus in the center and adjust all the levels it can to compensate for differences in lighting and color tone.

On the Nexus One, Android offers up a handful of settings you can change from shot to shot. The shot settings appear as white icons

overlaid on the image preview. Press one, and a translucent strip appears, and a small menu pops out for the option you pick.

At the very top, there's a button that changes the focus mode to either Automatic or Infinity—in most shots, you can stick with Automatic, but play with Infinity to see what kind of shot you can get. Beneath that is a GPS icon that changes whether the phone tries to collect location data to embed in each picture, and in the middle, the "(A)W" button, controls the white balance. This lets you set the color and white balances in the camera's sensor to either automatically adjust, or to compensate for a few specific kinds of lighting. I've found that Automatic works most of the time outdoors, but when you're shooting indoors and seeing tints of blue or orange, setting the white balance manually can be a big help. Second to last toward the bottom is a camera flash setting—auto, on, or off—which I usually leave set at "off," since the flash on most phones does very little to help all but the darkest, grainiest, why-am-I-still-in-this-club-and-not-asleep pictures. Finally, at the bottom, there's a zoom setting that you can adjust with a sliding bar to get in closer to your shot. Take note, though, that this is a digital zoom setting—your camera's lens doesn't actually adjust, and zooming in very close can sometimes leave your resulting shot a bit grainy or with digital "artifacts."

Because of the shape of your Android phone, and the way the camera was designed, most shots you take will probably be landscape-style, much wider than they are tall. You can, of course, change your grip and hold your camera upright to take vertical portrait-style shots. When you do so, your settings will rotate and move to the bottom.



Settings Bar in Upright Mode (Instead of Landscape)

On the Nexus One with the stock Camera app, the controls at bottom (or on the right when held landscape) are, from left (or bottom), the on-screen shutter control, the camera/camcorder switch, and a thumbnail preview of my last picture, which can be clicked to bring up a larger preview mode of recent shots.

Although my Android, and perhaps your Android, lacks a dedicated camera button, you can still do a "half press" on the shutter control on some phones to focus your lens and see what the resulting picture will look like (though this doesn't work at all on the HTC EVO 4G I've tested, and likely other HTC phones are left out, too). To try it out, press and hold on the shutter-style button, and wait for the image to focus and for the green framing bars that appear to show green. If your camera does have a dedicated camera button, you might be able to press it until you feel a small bit of resistance, but don't press it all the way:

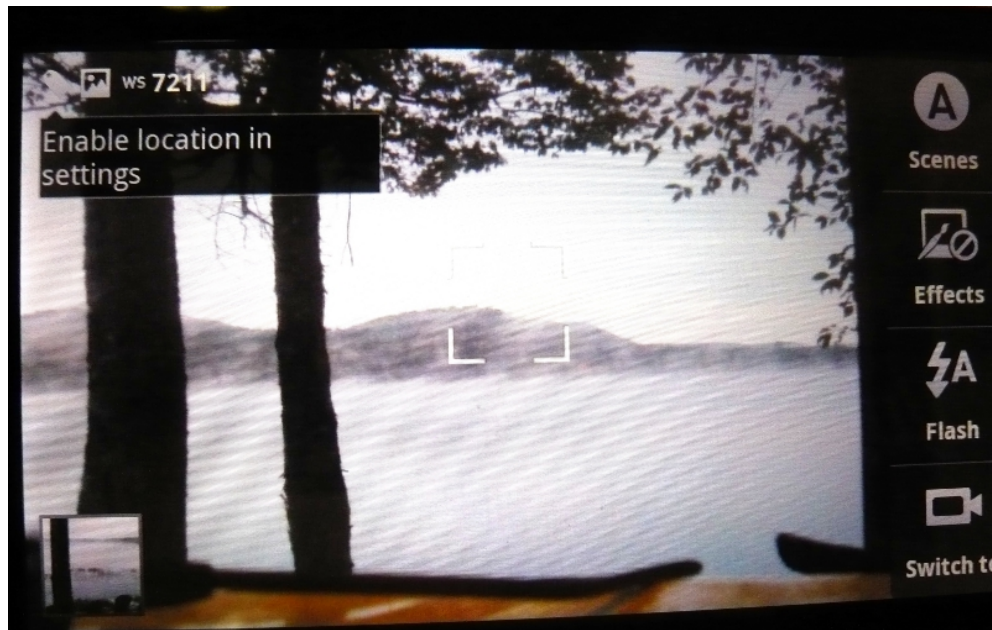


Half-press shutter button to focus lens

This is a really helpful tool when you're trying to time a shot perfectly—if you've already focused and lined up your shot, all you have to do is release the button.

Now, as soon as you release your shutter button, the shot will fire. It's a handy trick for when you're trying to time a shot just right, or avoid wasting an exposure on an image that you know, from the preview, won't look right at all.

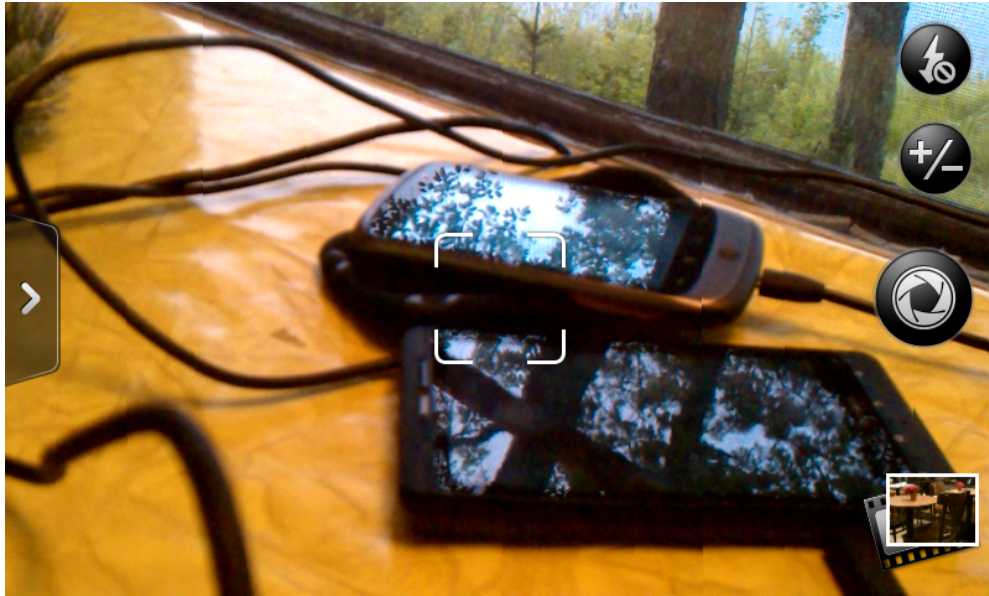
On Motorola's Droid X and other "Droid" phones, Motorola made a few changes to Android's stock Camera app, but not too many:



Camera View on Motorola Droid Models

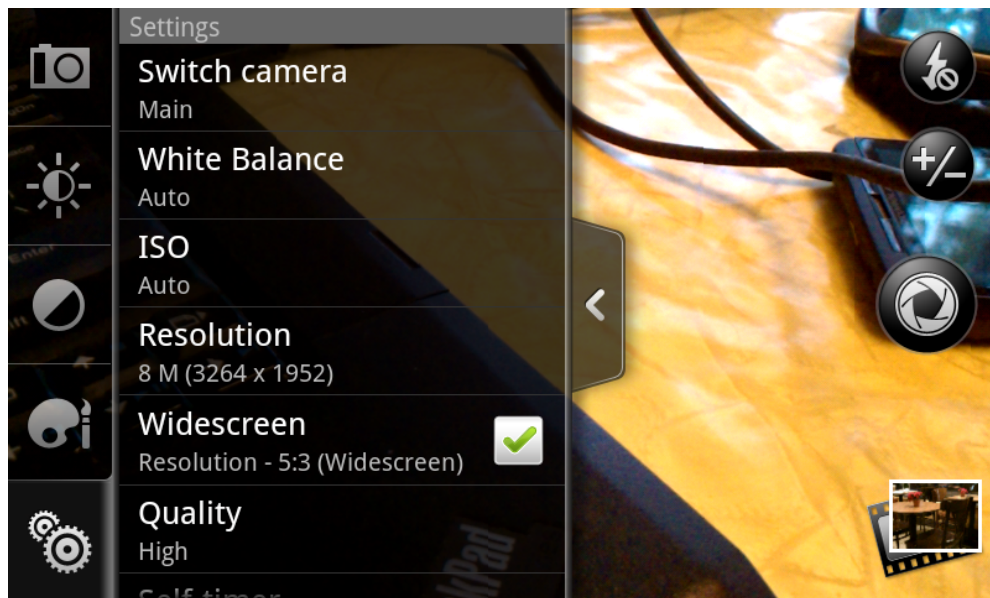
Apologies for the picture-of-a-phone-taking-a-picture image; the Droid X Camera app didn't like my screenshot tool. The Scenes and Effects offerings here are pretty nifty, and more like a standard point-and-shoot digital camera. The Scenes include "Sports" for moving subjects, "Sunset" for low-light outdoor shots, and a "Macro" mode for up-close shots of, well, usually great restaurant food. "Effects" changes the color tint to an old-time-y sepia, a very cool blue, black and white, or a few other goofy-but-fun setups.

On HTC's EVO 4G with the Sense interface, the camera controls are in mostly the same places as the standard Android setup, but there are also some cool unique tools.



HTC Camera View

The right-side controls for the flash, zoom, shutter, and photo review are familiar, but the tab on the left? That slides out to reveal a whole lot of photo-geek options:



HTC Camera Options

But, wait! What was that bracket you saw in the viewfinder just then? That's the focus indicator. On some phones, the focus is always in the center, or automatic only. On certain cameras, however, you can

either tap to set the point of focus in a shot (as with HTC phones), or drag the focus brackets (Motorola phones).



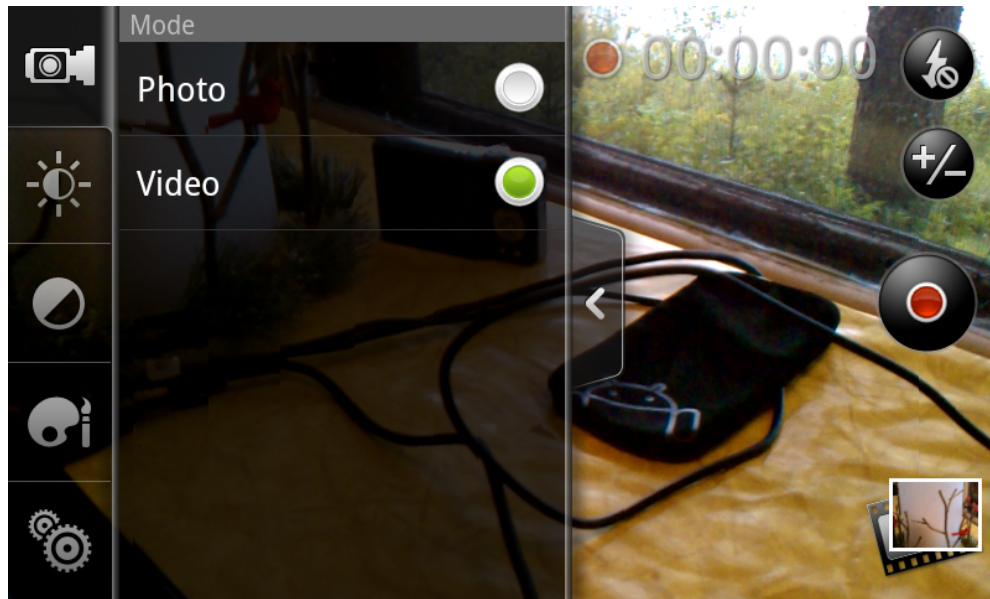
HTC Adjustable Focus Brackets

Take note, though, that on HTC phones, pressing and holding on a point of focus actually takes a shot—it's weird behavior, but, hey, it's their camera.

Shooting Video

Shooting video isn't all that different from grabbing pictures on an Android camera. On my Nexus One with the stock Android interface, in fact, it's exactly the same app—just flick the toggle from camera to video, and note that the zoom control becomes a video quality setting.

On other phones, there's a separate "Camcorder" app shortcut, but it's almost always the same as opening the Camera and changing the mode to video, as on this HTC phone:



e HTC Video Capture View

All the same lighting, balance, and other options are available, and you've only got one button to use to control the action—press once to record, press again to stop. Some phones might have additional offerings, such as Motorola's "Scenes" that do neat things like adjust the microphone levels for windy outdoor settings. In general, though, you point, shoot, and save.

Reviewing Your Shots and Clips in the Gallery

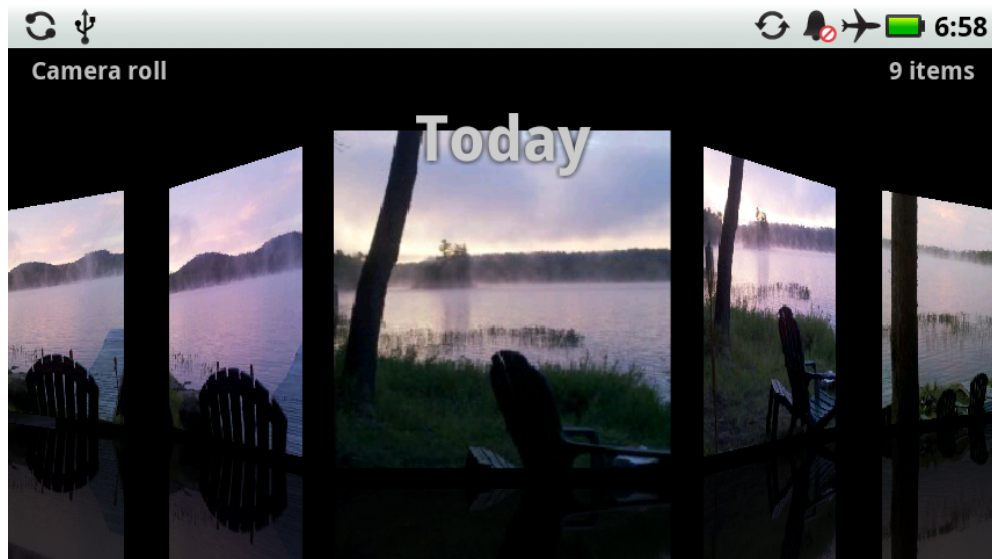
Just nabbed the perfect shot? It's easy to share it with friends, whether they're right next to you or thousands of miles away. On some cameras, right after you capture an image, you'll see it on your phone's screen for a few seconds. While it's up there, you can tap one of the on-screen buttons to keep it there, or quickly share it through the web or one of your apps:



Instant Options on HTC

In the case of an HTC phone, pictured above, you get these options, from left: Bring the image up in the full "Gallery" display (more on that in just a bit); Share the image through email, SMS, or other means; Delete it, because you're not a fan; or quickly head back to the regular shooting Camera mode.

But if a few seconds go by, or you take quite a few pictures and want to review them all, you can press the thumbnail in the corner of your Camera mode to get a bigger, more functional view of your photos and videos. This is the Gallery, which you can also get to through the shortcut in your app tray:



Droid Gallery View

Like the Camera mode, the Gallery has been customized in different ways on most Android phones. Among all the galleries, though, there's a basic operation. You can "flick" through your photos by swiping left and right on most any modern Android phone. Tap an image for a closer look, and hit the Menu button to get a menu of options like those you saw above: Share, Delete, go back to Camera, etc. Some phones will have unique options; the Droid X, for example, offers a "Quick Upload" option for automatically sending your photos to a default sharing location: Flickr, Picasa, Facebook, etc.

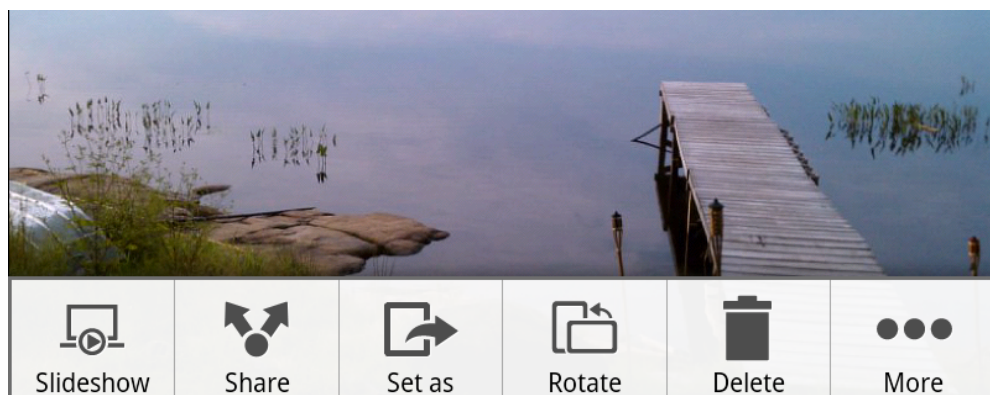
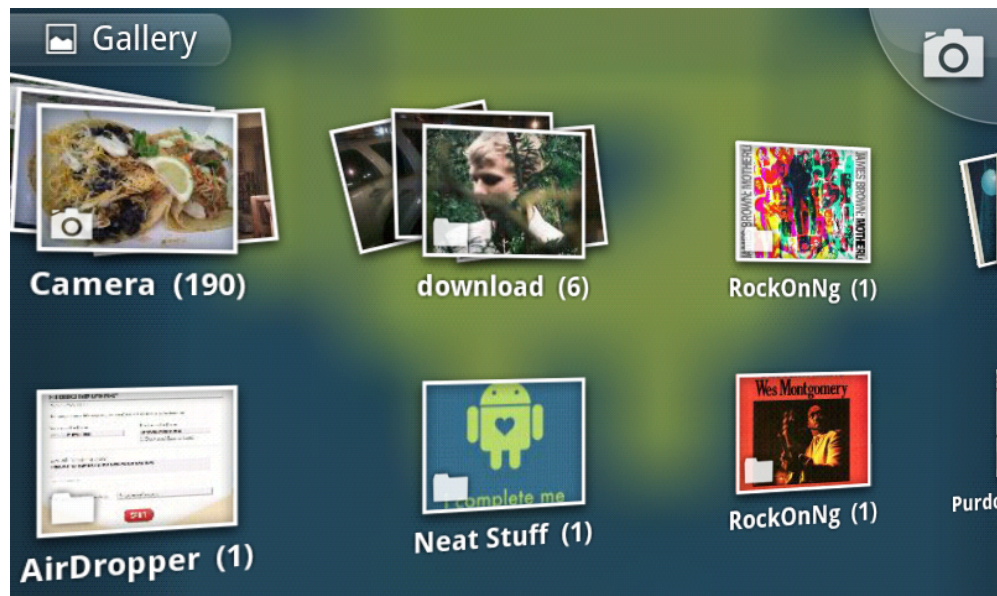


Image Options in Gallery

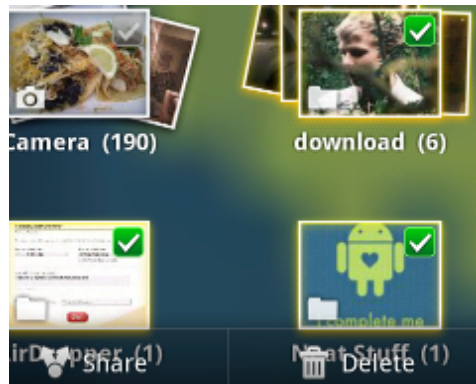
That's how you see your photos when you review from the Camera. If you want a wider look at all the images on your phone—downloaded

from the Internet, grabbed from email attachments, and stored on your SD card—open the Gallery app from your home screen's app tray, then, if it opens on a particular photo, hit your Back button until you end up at the larger view of your photos:



Nexus Gallery

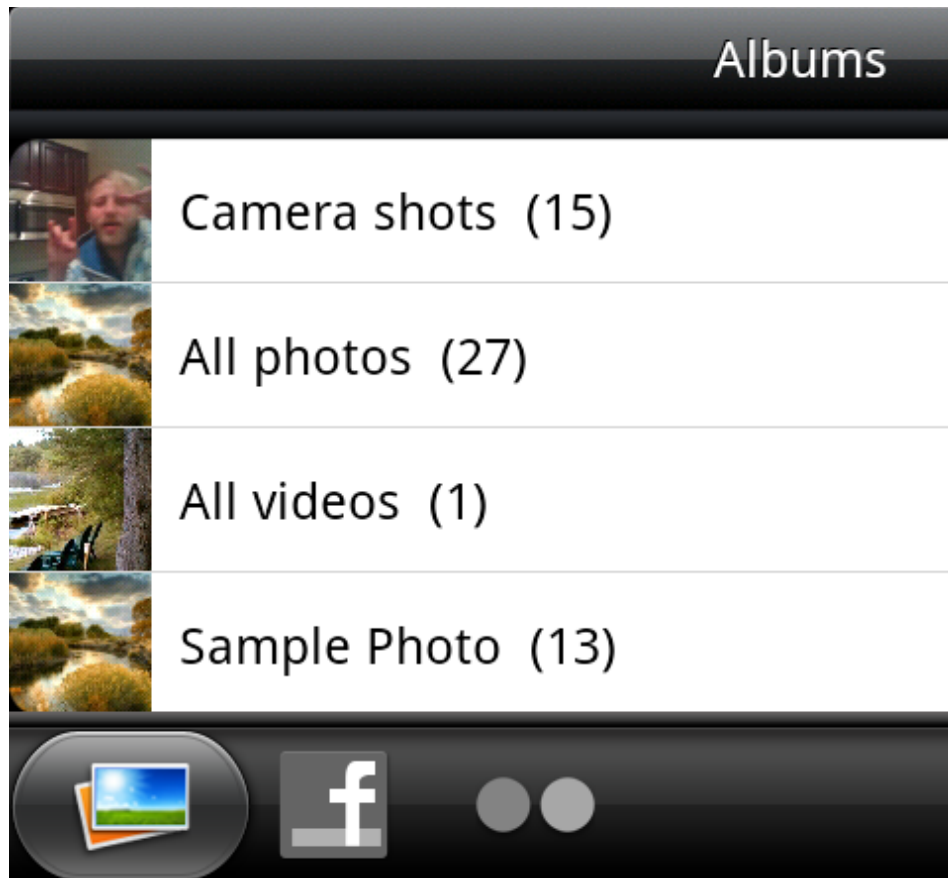
Above is the view from my Nexus One gallery, with the standard Android interface. Of all the apps that phone makers like HTC and Motorola chose not to port over to their own phones, this one is the strangest. It aggregates photos from both your phone's microSD card and your Picasa Web Albums, and offers a few neat tricks, like shifting its perspective slightly when you tilt the phone, and expanding the photos in an album like a deck of cards when you pinch and expand your fingers over an album.



Selecting Whole Albums

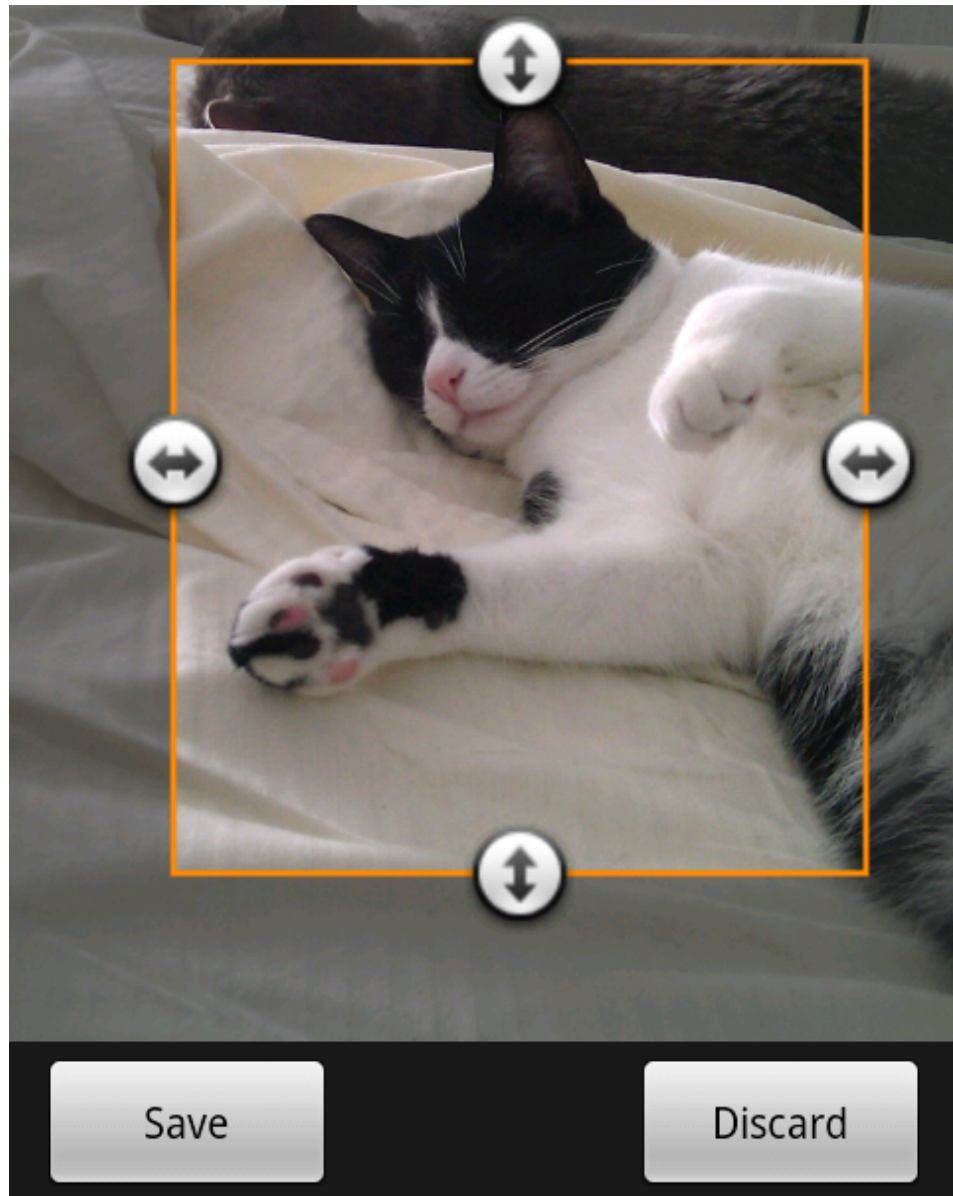
But let us put aside my personal platform differentiation gripes for the moment. If I wanted to take an action with multiple items here, I'd press and hold on an album, then notice a check box appear in the corner of each album. After that, you can let go and start checking off other albums you wanted to select for sharing, deletion, or other action.

Click an album, and you'll see, well, all the pictures in it. You saw the Motorola carousel-style view previously, with the date ("Today") shown images as you flip through them. On an HTC phone, you get either Grid or Filmstrip style views, which you can switch with an option under the Menu button. HTC's Gallery also provides a built-in browser for Facebook, Flickr, or other networks you've connected to.



Selecting Albums on HTC

When you click an individual photo to view it, you'll often have the option to make a few adjustments right there on your phone before sharing it or stashing it away. On the stock Android Gallery, for example, you can hit the "More" menu on a photo, then select "Crop" to trim a shot down to its essentials. Use your fingers to expand the margins of the cropping area:



Cropping an Image

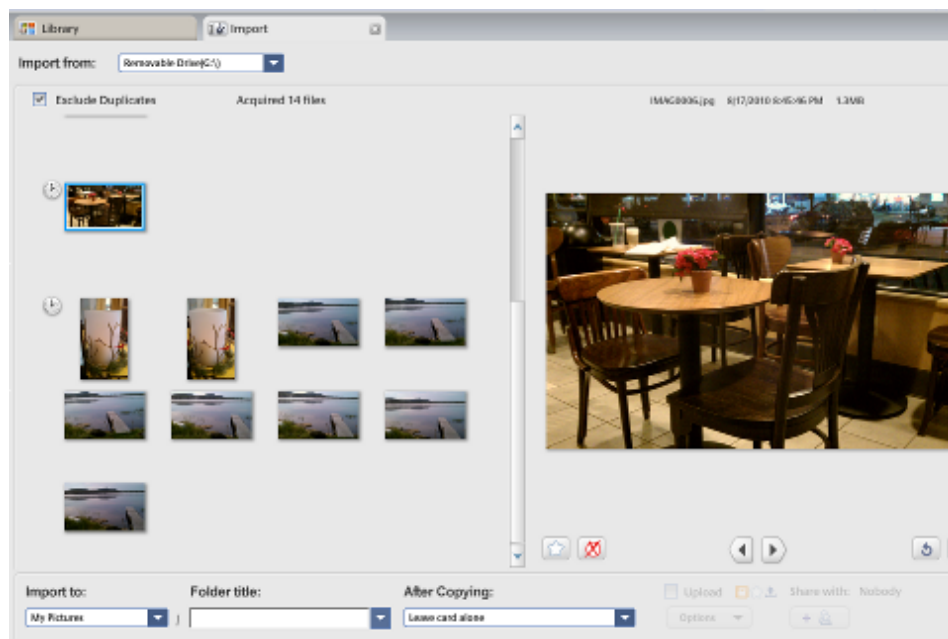
Cropping and rotating are helpful, but you can also use the "Set As" function found on most phones to set an image as a contact icon, a wallpaper, or as some other photo background on your phone. You'll use the same finger controls to set the margins of your wallpaper, which varies depending on your phone resolution and screen size.

Desktop Apps for Managing Photos

As noted in the tutorial on "Getting Media On and Off Your Phone," some Android models come with software for your Windows or Mac computer that help manage your phone's files, including pictures. When you plug in a Droid model, for example, a screen appears indicating how many new pictures have been taken since you last connected your phone via USB, and offers to open up a program to import and manage those photos.

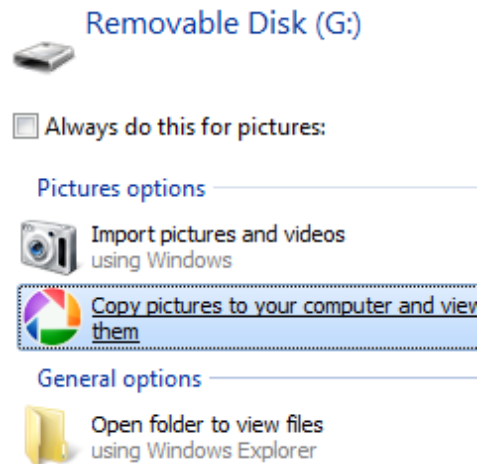
If you already know and use a great photo management software, go ahead and keep using it. When you plug in your phone, simply mount it as a USB drive, or "mass storage," as explained in that tutorial. Your photo app will think it's just like any camera card, and can import the photos from your phone.

If you don't have a photo management application, or don't really dig how Windows or Mac handles photo importing, try Picasa. It's free software from Google, for both Windows and Mac systems (and Linux, too, though that version's a bit backdated). It's great at importing photos, doing helpful edits that don't require advanced Photoshop knowledge, and, perhaps most helpfully, batching together photos and resizing them for easy email sending.



Importing Photos to your Computer with Picasa

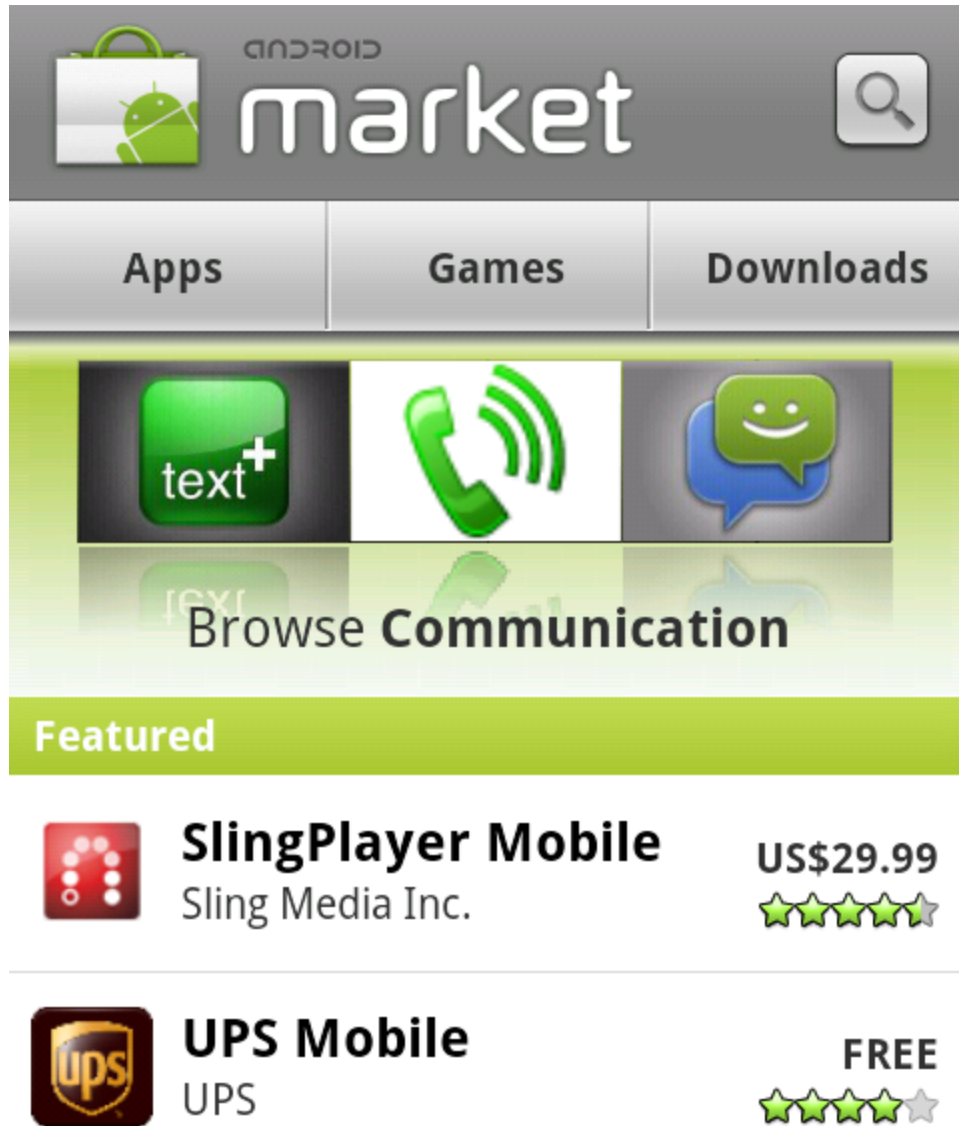
On a Windows system, it's easy to make Picasa the default photo importer for your Android. Just plug in your phone and select the USB/mass storage mode from your phone's menu that pops up (or pull down the Notification Bar and tap the USB option, as previously described).



Using Picasa through a USB connection

Windows will pop up with a box noting that it's found a storage device with pictures on it. If you have Picasa installed, you'll see an option to "Copy pictures to your computer and view them," with a multi-color Picasa icon next to it. Before clicking that option, check off the "Always do this for pictures" box at the top of the prompt. Now, whenever you plug in your Android phone, or any digital camera, Picasa will offer to import your photos. More importantly, though, it will batch your photos by shooting date, let you give them proper names, and provide smart tools for making them look better. If nothing else, check out the "I'm Feeling Lucky" button on the photo editing page—it's a real lifesaver.

The Market and Apps



Android Market

Like the iPhone, Android phones have their own "store" to download both free and paid applications. Unlike the iPhone, that's not the only place to grab apps from, and the Market is a good bit more free and open.

As app makers and users have discovered, there's definitely a drawback to all that wide open space. Great apps can sneak right by the average user, annoying and unworthy apps can clutter up search results, and the average user can feel like they've been dropped into the food court of an unfamiliar mall where everybody speaks Basque.

With that bit of tempering out of the way, let's jump into the fire.

Browsing the Market

Open the Market app from your App Tray at the bottom center of your home screen—it might also be a shortcut pre-placed on your home screen. Every so often, the Market will take a good bit to load, relating to its syncing of the apps you have installed with what's available, so it can check for updates. Give it a minute, but don't be afraid, either, to hit the Home button and re-launch it a bit later.

The Market has three main functions, though you wouldn't quite know that from the layout. From the Market, you can:

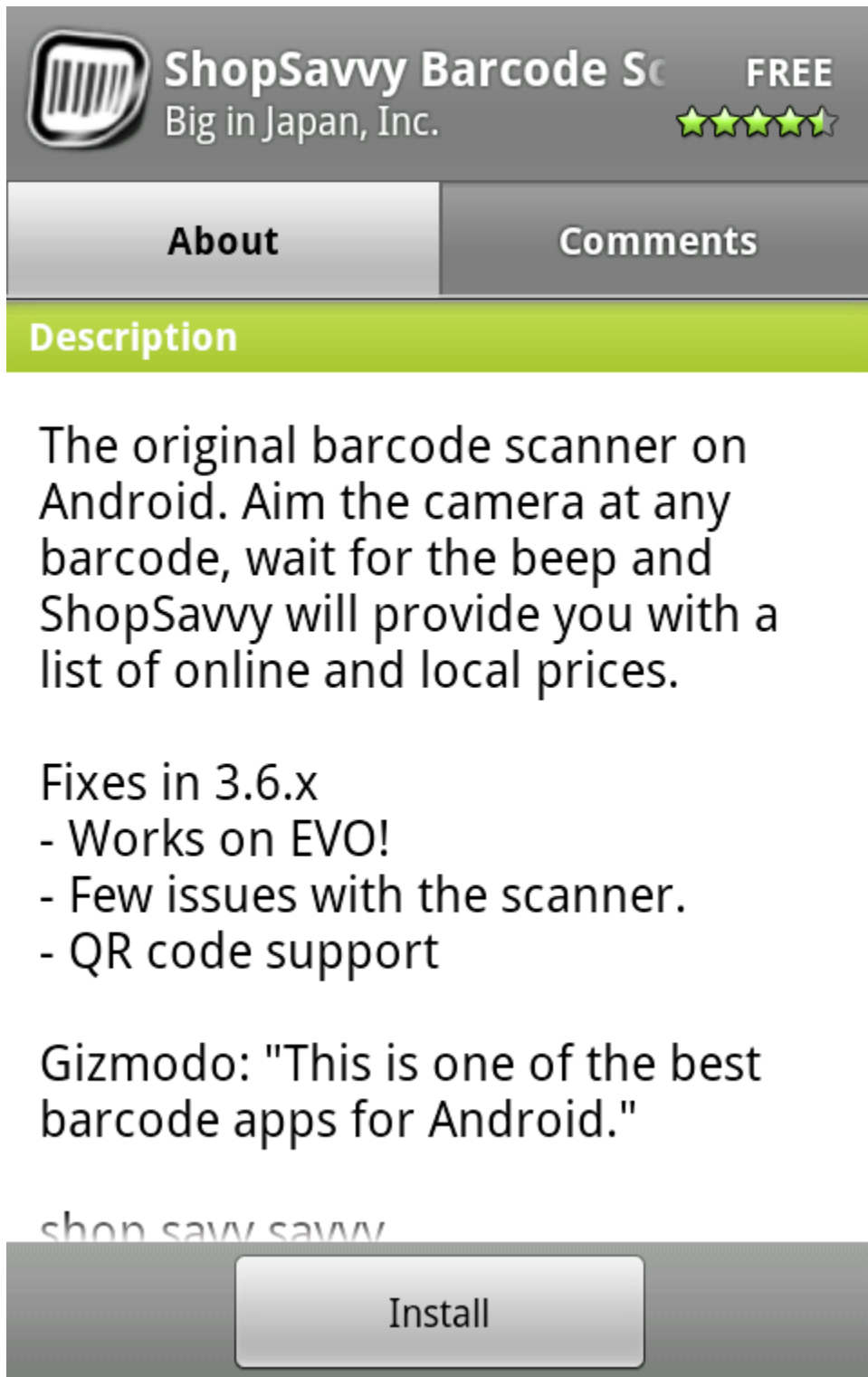
- **Browse popular and recent apps and games:** In about 20 general categories (Communication, Health, Productivity, Sports, etc.). You can click on "Apps" or "Games," or pick a category from the rotating center bar, and then see the "Top paid," "Top free," and "Just in" apps in each category. Each list will show you infinitely more results as you scroll down. There is, unfortunately, no filtering or sorting options for any of the categories, and "Top" is a bit vague as to whether that concerns popularity or rating or who-knows-what.
- **Search out apps:** Reach this with the (all-too-small) magnifying glass button in the upper-right corner, or by hitting Menu and choosing Search. You'll search the whole text of an app's entry, which can be good for finding apps that work with certain services or functions, and bad for when you type in "twitter" and

feel completely overwhelmed. There's no filtering, sorting, or saving searches, unfortunately, but the search box will remember your searches when you return.

- **Update or uninstall apps you've downloaded:** The third, right-side button on the Market's front page is Downloads, which leads to a list of every app you've downloaded on your phone, and some that were placed by your phone's developer. Apps that have newer versions available in the market show an "Update available" message in orange, and have an "Update" button available when clicked. Android phones running 2.2 and later also have an "Update all" button showing on this screen when updates are available, but some apps will still require manual clicking and updating. That's usually due to a change in the permissions an app asks of you, a new license, or the developer simply requesting some attention be paid.

Editor's note: As you might have noticed, I'm not a big fan of the Android Market's layout, search, or the preponderance of not-so-helpful apps. Google has announced some big changes for its next Android release, due before the end of 2010, some of which put the burden of app searching on the web. In the meantime, this is how it is.

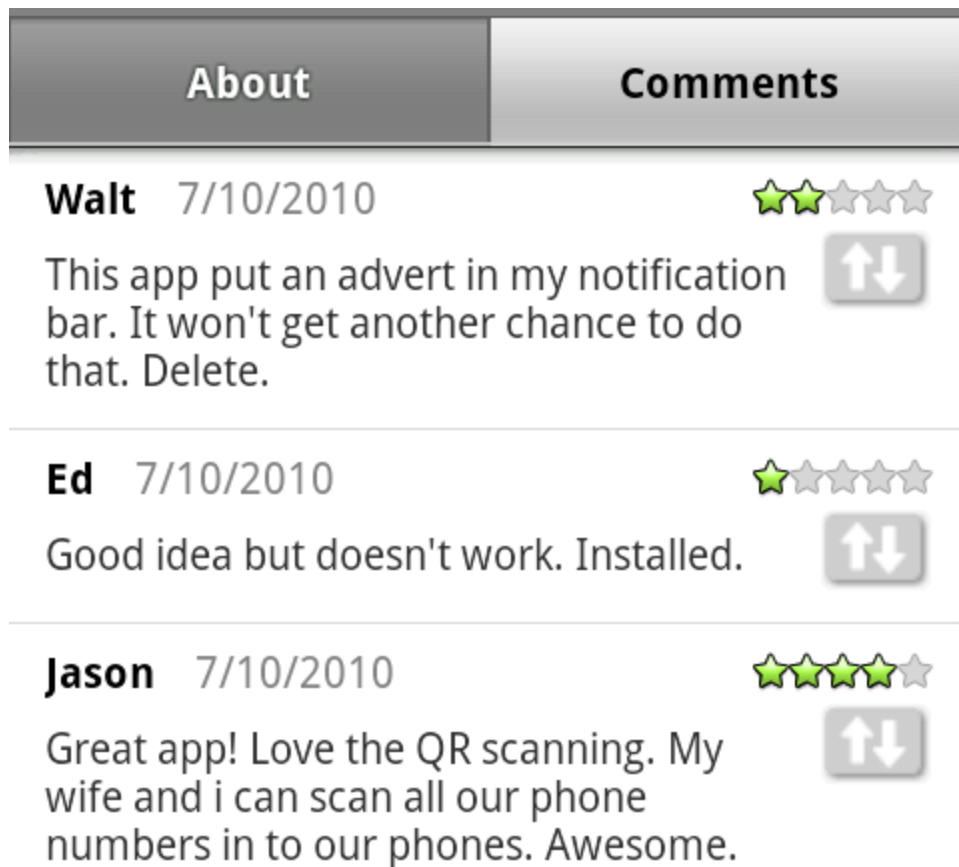
Examining an App



An App's "About" Section

Find an app you like? Give it a bit of a look-over before you hit that obvious "Install" (or, possibly, "Buy") button. Each app currently gets

an "About" section, with limited text space for the developers to describe, promote, and explain their recent updates to their app. Scroll down a bit further, and you'll find links to more applications made by the developer, the developer's web page, an email link, and even a phone number to call. There's a "Flag as inappropriate" link for apps you truly can't understand the existence of.



User Comments Section

There's also a "Comments" section, where your mileage will vary greatly. Good, helpful, insightful reviews have been found here, but the reviews generally suffer from the same kind of polarity as YouTube: most everything is either one-star-worst-ever, or five-stars-awesome-app-great-job. You can click the up/down arrows, or press and hold on a comment, to mark it as "Helpful," "Unhelpful," or "Spam." Like the app categories and search, you can scroll down endlessly as the Market loads more comments.

Installing or Buying an App



This application has access to the following:

-  **Your location**
coarse (network-based) location, fine (GPS) location
-  **Network communication**
full Internet access
-  **Hardware controls**
take pictures
-  **System tools**
change Wi-Fi state, prevent phone from sleeping

App Permissions

Click the "Install" button on an app's Market screen, and you'll be presented with a screen listing everything that app will have access to on your phone. Like the Market itself, it's a combination of refreshing honesty and bewilderment. Apps must spell out exactly what they'll have access to—location data, cameras, settings, controls, and the like—but you won't know exactly what that access looks like until you've seen the app in action. Some users may have no idea what some of the permissions ("Change Wi-Fi 'state'?") mean at all. Scroll down a bit, and by clicking the "Show all" drop-down button, you can see permissions that nobody is likely to get too

worked up about (view the state of Wi-Fi and cause a vibration, in ShopSavvy's case).

If you're okay with what the app says it will have access to, hit OK. Not sure? I'd recommend entering the app name, plus "Android," into Google and seeing what comes up, along with checking out the developer's web site. If Android blogs or other sites have given notice to the developer's apps, and if the developer's site doesn't look like the company was making Ultimate Gaming Collection knock-off CD-ROMs just last year, you're likely in the clear. If you see no notice of the app, and the development site can't be found or tells little, hold off. Otherwise, hit "Install," and after a short download, your app will appear in the App Tray.

Buying an App




@gmail.com

Subtotal US\$2.99

Total US\$2.99

Pay for this with

DISCOVER xxx-

Android market accepts



Downloads can be returned for a full refund within 24 hours of purchase. [Refund Policy](#)

Buy now: US\$2.99

Buying an App with Google Checkout

There are just one or two screens' difference between downloading a free app and buying an app. In general, most app developers offer a free or lighter version of their app—usually named with "free" or "lite" at the end—that's missing a few features that fans of the app will definitely want. When you buy a full, paid app, you're shown a tiny little web page, where you can pay with a major credit card (usually

Visa, MasterCard, American Express, and Discover are accepted) or, in some situations, have the purchase billed to your wireless carrier account (including T-Mobile in the U.S.).

No credit card in Google's system? You can add one at a desktop computer through [Google Checkout](#), the backend used for Market purchases. You can also add one through your phone, but consider how you're connected to the internet first—don't send a credit card over unknown Wi-Fi, in other words.

After the purchase goes through, you'll get a receipt mailed to you by Google, and, after a short delay, your phone should start downloading the app, just as with a free download. If you buy the wrong app, or find the app entirely not what you were hoping, **you have 24 hours from the time of purchase to "return" a purchased app.** The option should show up in the Market list of Downloads.

It's also worth noting that once you purchase an app from the Market, you'll have purchased that app in perpetuity for use on any Android phone you own. Whether you upgrade, or replace the phone you dropped in the pool, you can always re-download any app you've paid for, unless the developer has released a version so new and different that they've cut off access. Then again, a kind email can often rectify that kind of oops-too-late hang-up.

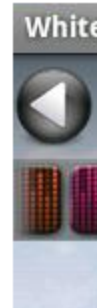
Alternate App Finding: QR Codes

oid Apps

Products



ent to help you relax or
cean waves, rain storms,
shington Post so find out



QR Code

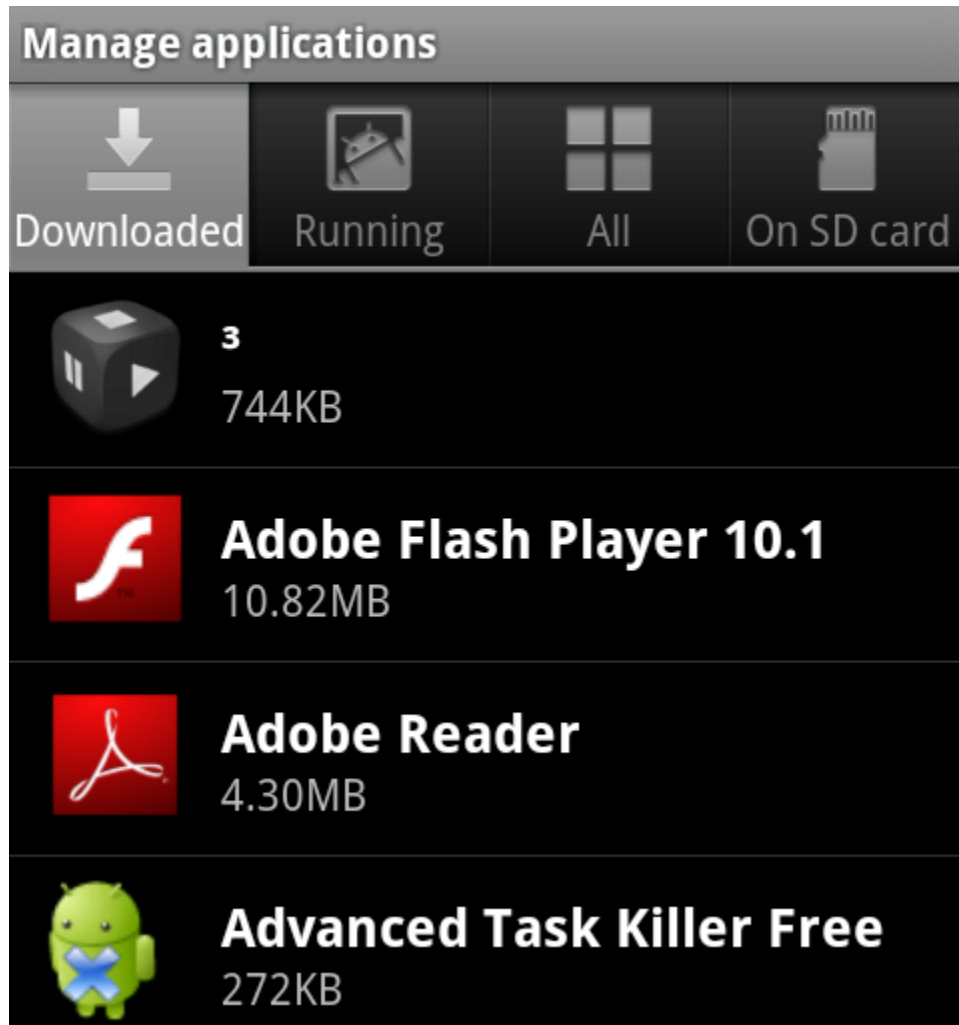
Because searching is so non-specific in the Market, and because apps can share common names and descriptions, many developers have taken to providing direct Market links to their apps through QR codes. They're like bar codes with another dimension thrown in, and you'll need an app to scan them from a web page or paper document. Search for Barcode Scanner in the Market, find the one made by ZXing Team, and install it (it's one of the 10 things we suggest new Android owners should do right away). Open it up whenever you see the funky, square, four-cornered codes on a web page or elsewhere, and you'll head right to the app you were looking at.

Managing and Troubleshooting Installed Apps

If you simply want to uninstall an application you've downloaded, you can do that pretty easily by heading to the Market app, clicking the Downloads header, then picking out the app and choosing "Uninstall." To do more advanced app management—clear out its data, change what it opens by default, and force it to stop when it goes awry—you'll need to head into the Settings.

Finding Your App

From your home screen, hit the Menu key, choose Settings, select "Applications," then pick "Manage applications."

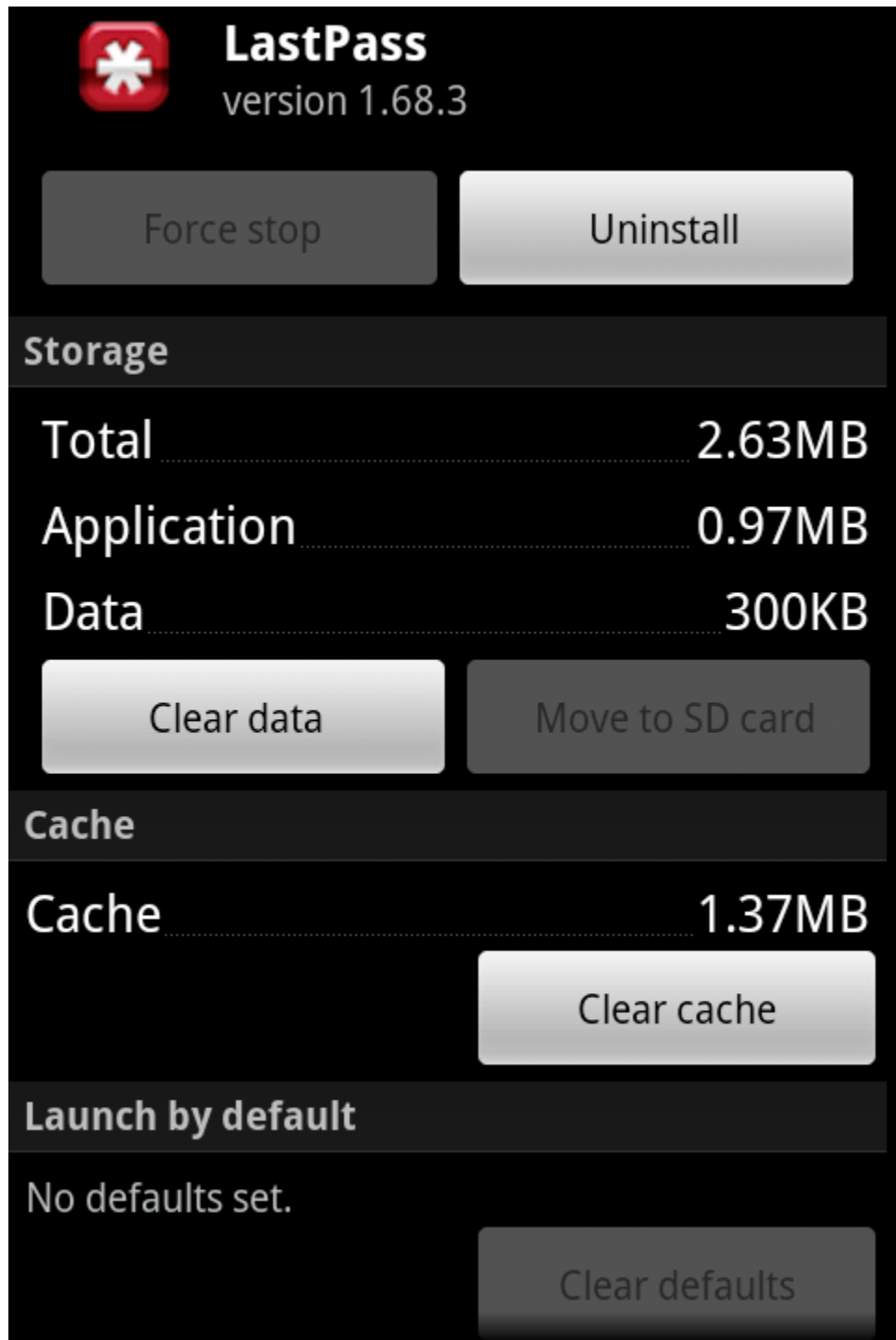


Manage Applications Screen

Note: The screens shown here are from the application manager in Android 2.2, which is much improved since the 1.6 builds. Your screens may be slightly different, but most of the functionality is still there.

The categories at the top show you the apps you can access: apps you've downloaded, apps currently running, every app on your system, and apps you've moved to your SD card (a feature exclusive to Android 2.2 and later). Generally, you'll want the "All" view, as it contains everything in the first two categories to its left.

In the "All" view, find the app you're looking into:

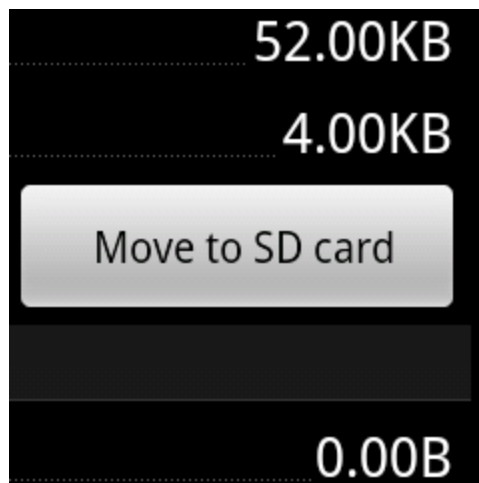


All View

Fixing Buggy Apps and Clearing Up Memory

If the app is running, you'll see a "Force stop" button—good for troubleshooting apps that seem to be going haywire or not responding. "Uninstall," to the right, does just what it seems.

The Storage section shows what kind of space the application is taking up in your internal memory—though a little extra is taken up by system files the app installs elsewhere. On most modern phones, that's not much of a concern, as apps take up just a few megabytes of space, and most newer phones offer at least 512 megabytes of internal storage. Some of that is taken up by system software and built-in apps, but only heavy downloaders will ever reach a memory limit. If you do, you may be able to move some applications to your removable microSD card with the "Move to SD Card" button (see the nearby box item for more on that).



Move heavy downloader apps to SD card if you're nearing an internal storage limit.

If you're wondering just how much space is left on your phone, head back to the main Settings screen, select "SD card & phone storage" (or a similar storage-related entry), and scroll down to find the "Internal phone storage" section, where your available space is listed.

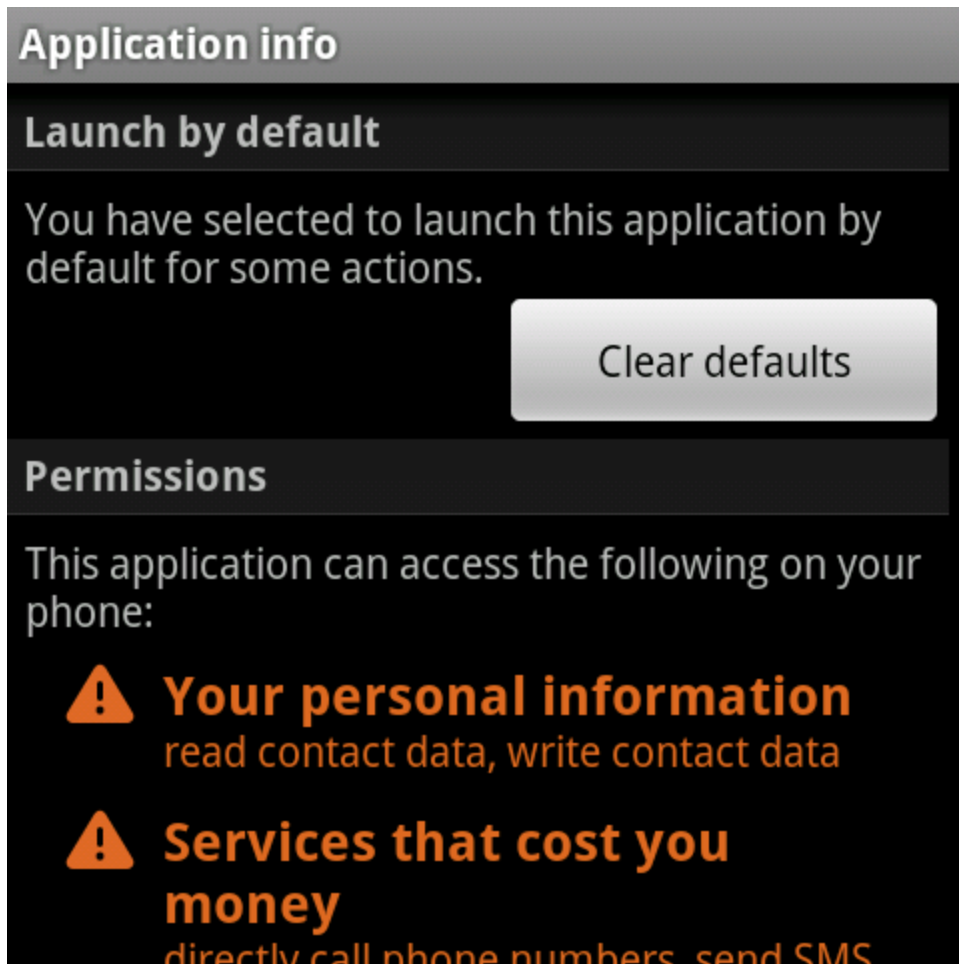
Back on the application management screen, notice two buttons with confusingly similar titles: "Clear data," up in the Storage section, and "Clear cache," under its own heading. Put simply, "Clear cache"

wipes away all the convenient files kept for speeding up the app, while "Clear data" wipes out passwords, settings, and other data, to return the app to how it was when you first installed. Between these two buttons and the "Force stop" button up top, you've got a **four-step app triage checklist** for when an app just won't respond:

- **Force stop** an app. Check back to see if the app is now working and can open without a "Force close" prompt.
- **Clear cache** on the app, which will force it to re-download some items and address its internal files with a new look. Check again. If that fails...
- **Clear data**, and grin and bear it as you re-enter your passwords, settings, and particulars into the app. If the app still seems to have constant crashes and buggy operation...
- **Uninstall, then re-install:** It's free to do so from the Market, whether with a free or paid app, and many times you may find that a new release has addressed a particular problem an app may have with your certain phone.

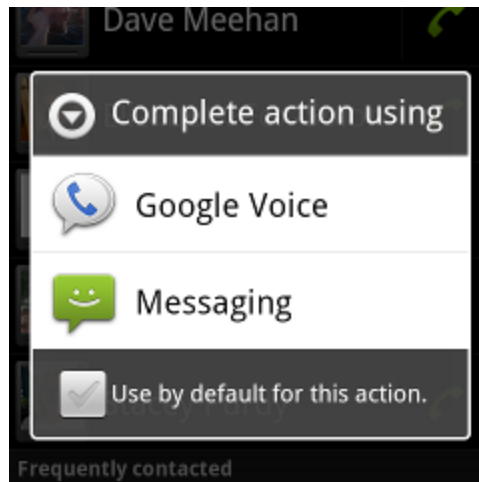
If nothing seems to work, you can certainly email the developer of an application and let them know about your issue. Be as concise as possible: "I get regular 'Force close' prompts when launching App X, even after restarting, on my HTC EVO 4G" is much more helpful than "Your app doesn't work."

Changing App Defaults



App Info

Further down on the app management screen, you'll see a button for "Clear defaults," though you can only push it if you've made a decision to always use this particular app for certain actions.



App Management Default Settings

PDF and other document readers and editors, Google Voice, and certain other apps can do the same functions as your phone's built-in tools, so after installing or activating such apps, your phone will ask you to pick an app to handle what you're about to do (pictured at left for sending an SMS text), along with a checkbox to set your pick as the default. Hitting "Clear defaults" on an app like Google Voice makes your phone prompt you to pick an app again, where you can choose a new default or just pick on a per-case basis.

Just a bit further down on your app management screen is a list of all the permissions an app has to operate and affect your phone. You saw this list when you installed the phone, but here it is again, for reference.

Alternatives to the Market: AppBrain and Unofficial Apps



The next version of Android, after 2.2, promises to include an instant means of searching and installing apps from a web Market, which then instantly download to your phone. In the meantime, we've got AppBrain, a service that can maintain a list of your installed apps—helpful for pimping them out to your friends—and also instantly install new apps on your phone, straight from the web.

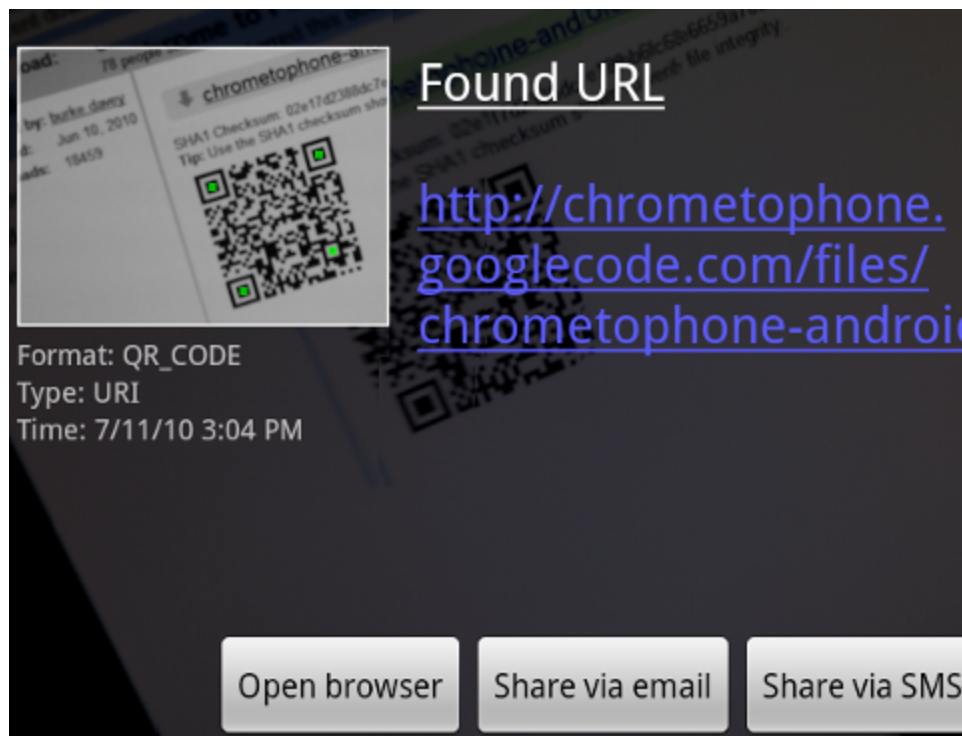
Instant AppBrain Installations

The process and details are [spelled out by AppBrain](#), but here's the gist:

- Head to [AppBrain.com](#) and **sign up for an account** (link is in the upper-right corner). You won't have to get a new password—AppBrain uses Google's authentication system, without ever actually seeing your Google password, to manage your identity and account.
- Head to your Market app and search for **AppBrain App Market**. After it installs, open it up from your App Tray (or search for AppBrain in your search box), and ensure that it's synced to your online AppBrain account.

- Head once more to the Market (seriously, it might be your last trip for a while!) and search out **Fast Web Install**. Install that app, then open it to ensure a synchronization with your AppBrain account.
- Now, whenever you've got the urge to search or sort apps, or find a specific app, head to AppBrain.com, click on the app you want, and hit Install. Almost instantly, your app will start downloading to your phone and install itself. Seriously. It's really neat.

Installing Apps from "Unknown Sources"

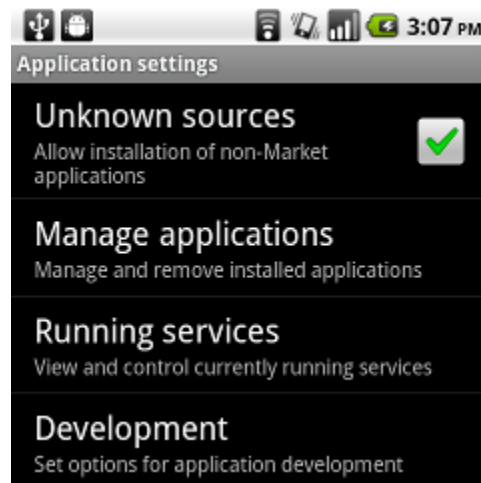


Unofficial Apps

Unlike the iPhone, the official Market isn't the only place you can install applications from. With a single switch in Settings, you can try out early versions of popular applications "in beta," check out the

work of diligent coders in their early stages, and grab apps that don't quite meet Google's Market standards.

Dangerous? A little bit, if you installed the wrong kind of app. But grabbing non-Market apps can also be very useful. As of this writing, audiobook maker Audible has a [beta version of its player for Android](#) that can't be had in the Market, but which made listening to *Girl with the Dragon Tattoo* possible on a recent car trip. To install it, you need to download the installer, or grab it using a QR code, and have your phone set to allow non-Market installations. I've also installed a little-known application, [Chrome to Phone](#), that can instantly beam web URLs, Maps locations, and even text I've selected in my laptop browser right to my Android phone.



Enabling Non-Market App Installation

To unlock a non-Market app installation, head to your Settings, into the "Applications" menu, check the box next to "Unknown sources," and confirm in the pop-up warning dialogue that you're aware of what you're doing.

From now on out, you can install any application any which way you want—through QR codes on unofficial app sites, by loading .apk files onto your SD card and installing them from there (using the help of a file manager like [Astro](#)), or some other fancy means we've yet to come across.

Now that you're up on how to install, manage, and uninstall apps, both the official way and through more clever methods, you can check out the section on our 20 Favorite Android Apps. Or, heck, save it for later, as there's more cool stuff coming up next.

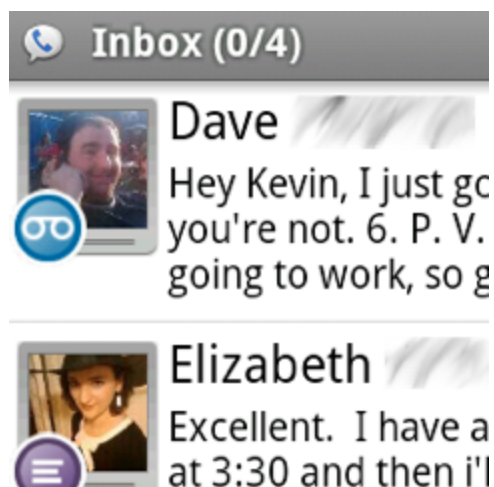
Tutorials



Tutorials: 10 Things to Do Right Away on Your Android Phone

Want to extend that magic feeling of limitless possibilities you get when starting up a new smartphone? Pull off these little maneuvers and installations, and your phone will feel that much more capable, right from the get-go.

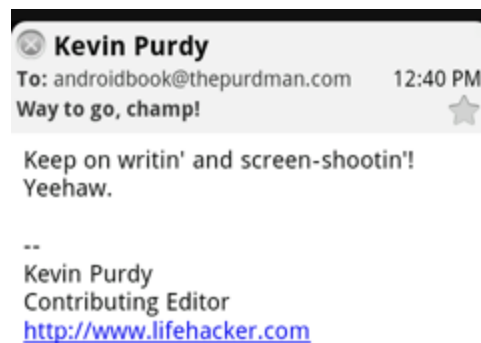
1 - Voicemail



Google Voice Voicemail

Head to google.com/voice and sign up for their Google's free service, but only the voicemail portion. While there's a plan that changes your number to offer killer features (covered in-depth in the Google Voice chapter), you can also take the middle path and just let Google handle your voicemail. Do that, and you can have computer-generated transcripts of your voicemail delivered to your phone, download MP3s of messages off the net, screen who gets through and what message they hear, and better integrate voicemail with your Android phone.

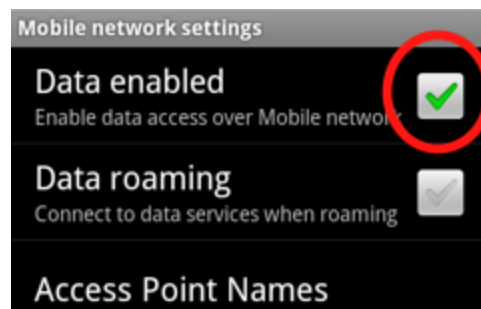
2 - Set Up Your Work Email



Alternate Email Address

Open the Email app from inside your App Tray (the middle center button on the home screen), then give it your work email details, or ask the IT types for the details. You don't have to become attached at the umbilical cord to work messages though—you can disable new message checking and notifications in the settings (detailed in the Gmail/Email chapter). You'll be glad to have access, though, because most work email servers don't offer a web version that's friendly to mobile browsers.

3 - Make sure “Data Roaming” is off (or on, if it's corporate's dime)



Turn Off Data Roaming in Home Screen Menu > Setting > Wireless & Networks

Hit your phone's Menu button while on your home screen, choose Settings, tap the “Wireless & networks” category, scroll down to find “Mobile networks,” then check to see if “Data roaming” is disabled. It's generally the Android default, but some have reported otherwise, and others have noted it switching on at other points. When you're close to the Canadian border, or on an international trip, you'd really, really regret having it on if it wasn't intentional. But if corporate's paying your bill, and it's important that you're always available, you could click it back on and pay whatever rates the international data cartel is charging that day.

4 - Add Frequent Contacts to Your Home Screen

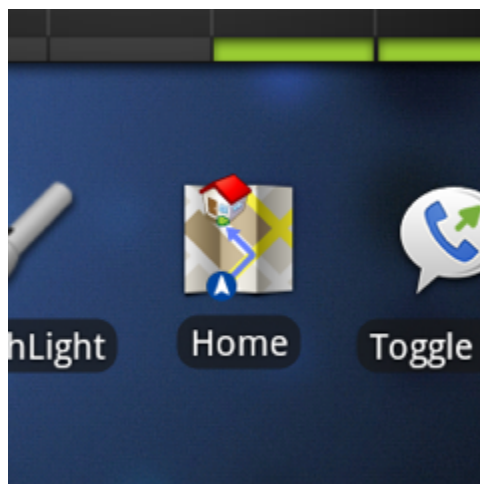


Home Screen Contact Shortcut

Press your finger and hold it on an empty spot on one of your home screens. Choose Shortcuts from the pop-up menu, select “Contact,” then scroll and find your VIP person. Place

that contact icon in a prime spot, and now you can call, text, email, view their Facebook profile, or even get directions to their place from anywhere. You could also pick “Direct dial” or “Direct message” from the Shortcuts list if yours is a one-medium relationship.

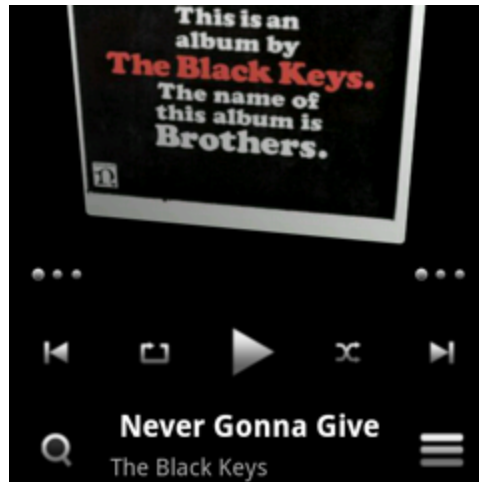
5 - Create a Link for Directions Back Home



Google Maps Shortcut

Press and hold on an empty spot on your home screen. Choose Shortcuts, then pick “Directions & Navigation,” then enter your home address in the “Destination field.” Keep “Turn-by-turn navigation” checked if you want the talking directions to come up, or un-check it for the standard Google Maps text, and name the shortcut “Home” at the bottom. Now when you're at a loss as to how you got where you are, at least you can get home and explain how you got so lost. (See Chapter 12 for details.)

6 - Install a Better Music Player



TuneWiki Screen

Open the Market app, hit the search button, then look for one of a few options: “TuneWiki” (automatic lyrics and album art fetching, geolocation posting), “doubleTwist” (great syncing with desktop software), or search for “abrantes” to find the “Cubed” app (great looks, features, and manual art fetching). This author has yet to meet an Android enthusiast who's been able to say more than “meh” or “it works” about the stock Music app—though that may change when a forthcoming update enables over-the-internet desktop music streaming. Regardless, you'll be glad to give a slicker player a try.

7 - Install a Barcode Scanner



QR Code

Open the Market app, search for “Barcode Scanner,” and install the app from the ZXing Team. Why? Soon enough (late fall of 2010, actually), Google will offer a way for Android owners to simply click on an application they want on the internet, then have it instantly beam over the air to their phone. In the meantime, there are QR Codes. They look like alien barcodes, they're all over the geekier parts of the internet and a growing number of magazines. You'll need an app like Barcode Scanner to scan them, which in turn loads the right Market page you can install from.

8 - Create an unlock pattern, PIN, or password



Unlock Gesture Pattern

Hit your Menu button from the home screen, choose Settings, select “Location & security,” then pick “Change screen lock.” Now when you or anyone wants to access your home screen and apps, it will require one of the following: a multi-point finger-drawn pattern (kinda-sorta secure), a four-digit PIN (pretty secure), or a password (wow, you're serious). If someone needs to dial 911 or another number real quick, they can still do so with the “Emergency dial” button at the very bottom. Even the screen pattern, potentially bested by looking for a finger smudge pattern, is better than letting your prank-minded (or drink-addled) friends have way too much fun when your phone is on the table.

9 - Install Dropbox

CAG



20 Things



Google Voice



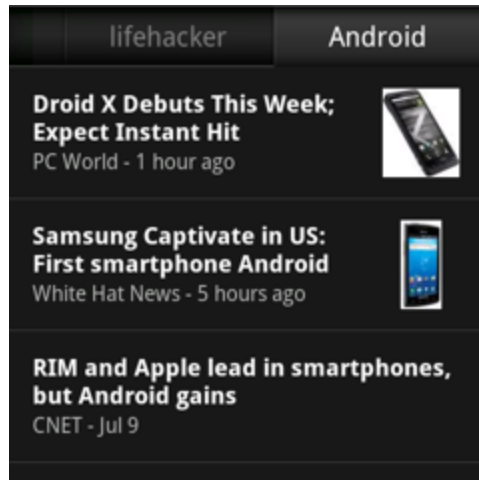
2010-01-14 12.0

284.0 KB modified 5

Dropbox Folder

Open the Market app, hit the search button, and search for “Dropbox,” then hit “Install” at the bottom of that screen. Put simply, [Dropbox](#) is a wonderfully easy service that gives everyone 2 GB of space on the net, and free software on almost every platform. Put a file in your Dropbox on your Windows system. Load up Dropbox on your phone, and that file is in there—same as on your Mac, your iPhone, or on the Dropbox web site.

10 - Add Your Favorite Topics to News & Weather



Focused News & Weather Widget

Swipe over to get to the screen just left of your home center screen, or press the center App Tray button and load “News and Weather.” Next, hit your Menu button, choose Settings, pick “News settings,” then hit “Select news topics.” You can check and un-check options like “World,” “Business,” and the like, but at the top, “Custom topic” gives you a tab of whatever you'd like. Keep track of what the web has to say about your business, follow your favorite teams, or give in and enter your name in quotes to keep a steady ego stream going.

20 Great Android Apps to Check Out

AppBrain & Fast Web Installer



App Brain

Google's promised that an upcoming version of Android will let you install applications straight to your phone from a browser-based Market. That sounds neat, but in the meantime, there's AppBrain. Sign up at appbrain.com (which signs you in through your Google account), download the app, and you can then browse AppBrain's better-organized web market, install apps in bulk, share a list of your current apps with friends, and go a step further with the Fast Web Installer, an app that, once installed and activated online, lets you click a button and have an app instantly download to your phone. (Free)

Dropbox



6:21 AM

My Dropbox



Caffeine



CAG



Chrome apps



Clips



Computer Stuff



dd-wrt



Search



New



Upload



Refresh



Help



Settings

Dropbox

To paraphrase John Gruber at the Daring Fireball blog, the only people not using Dropbox are probably those who haven't heard of it, or gotten around to installing it. Every sign-up gets 2 GB of free space on Dropbox's servers, which then exists as a kind of magic folder on any computer or smartphone. So Dropbox is great for instantly getting files from your computer to your Android phone, but it's even better at stashing content right from your phone. You can share certain files and media straight to Dropbox, and use the app to take photos, videos, or audio recordings that save straight to your cloud space. (Free)

Epicurious

Back

Weeknight Dinners



Herb Salad with Feta, Roasted Red Peppers, and

Bon Appétit, September 2010



3 forks

100% would make it again
(based on 3 user reviews)

view recipe

1 of 921



Home



Search



Favorites



Shopping List



About

Epicurious Recipe Listing

Our pick for the best recipe app in the Market. Browse or search over 20,000 recipes from the Conde Nast archives, whether by name

or using the ingredients you need to cook up. When you've got your recipes picked out, Epicurious offers a very kitchen-friendly recipe mode, putting the essentials in big type on your screen and going step-by-step through the tasks. (Free)

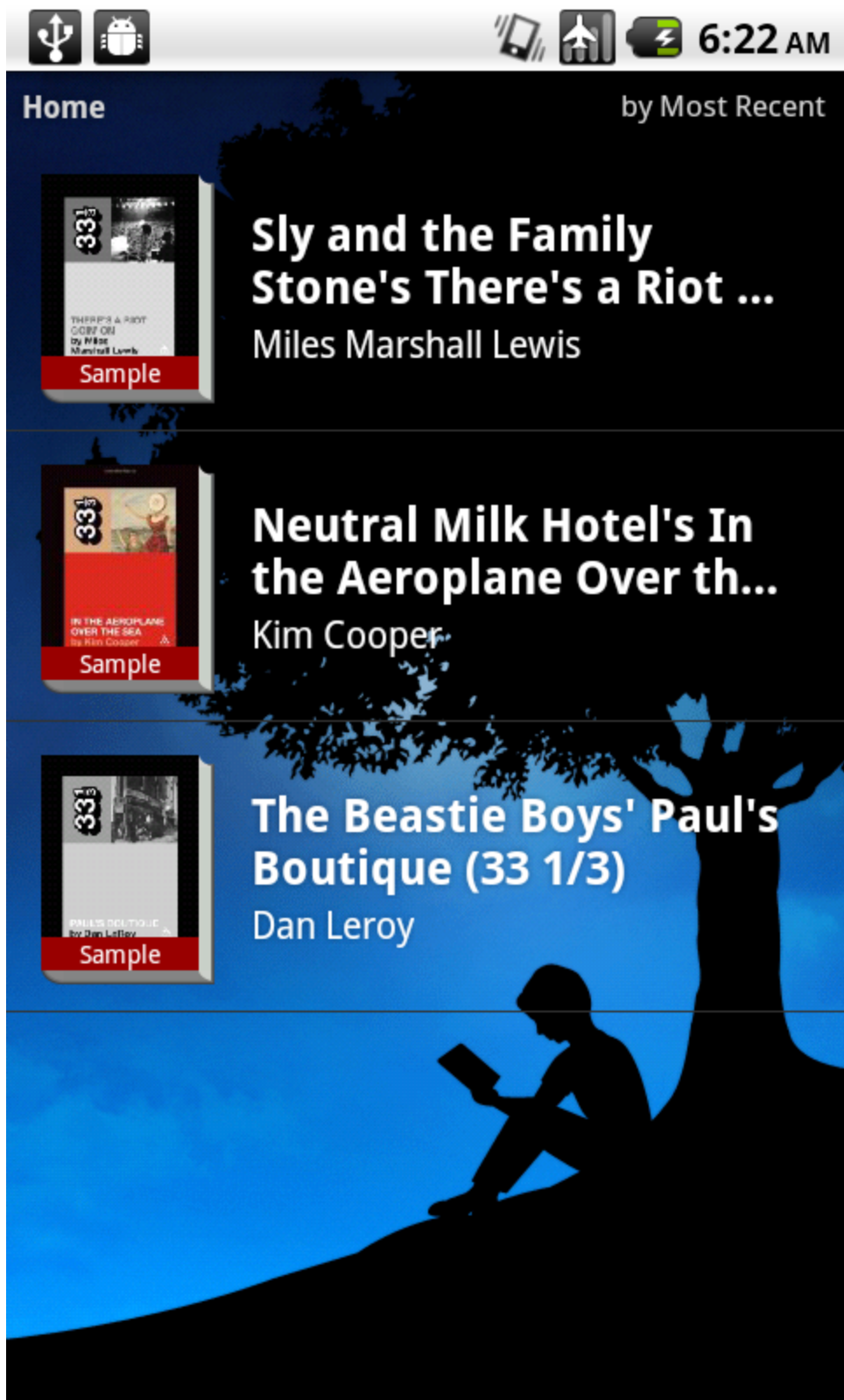
Evernote



Evernote

Remember that thing you saw in the store window last May, the thing that would make the perfect gift for your special someone? Well, now it's December, and it's hard to pull that up from memory ... unless you used Evernote to store a picture, a text note about the item, or a voice recording of your description. Evernote is a universal note-taking system, or “ubiquitous capture” tool, that lets you quickly file away notes and media from your Android, organize them with tags, then search through all of it later on your phone, your Windows or Mac computer, online, or anywhere Evernote reaches. (Free)

Kindle



Kindle App for "Android"

You've probably heard about Amazon's e-book device, and maybe you even knew about how Kindle apps are available for Windows, Mac, Android, iPhone, and more platforms. But until you've browsed Amazon.com for some reading material, hit the “Send chapter preview to Android” buttons, and seen the first chapter of a great book become subway or bank line reading material, you haven't really felt the niftiness. (Free)

Listen



6:22 AM

My listen items



over 1 month ago, 51 mins long

8.86 MB



#178: Superpowers

We answer the following questions abo...

1 week ago



This Week In Google 56: I'm Not Dead Yet

Hosts: Leo Laporte, Jeff Jarvis, and Gina...

4 days ago, 1:13 long

33.84 MB



Fresh items (2)

Refreshed: 4 days ago



Zencast 274 - Mindfulness

Mindfulness - Andrea Fella This teac...

1 week ago, 54 mins long

18.69 MB



August 13, 2010 (On The Media: Friday, 13 August 2010)

A look at net neutrality and what we've...

1 week ago, 52 mins long

36.07 MB



Zencast

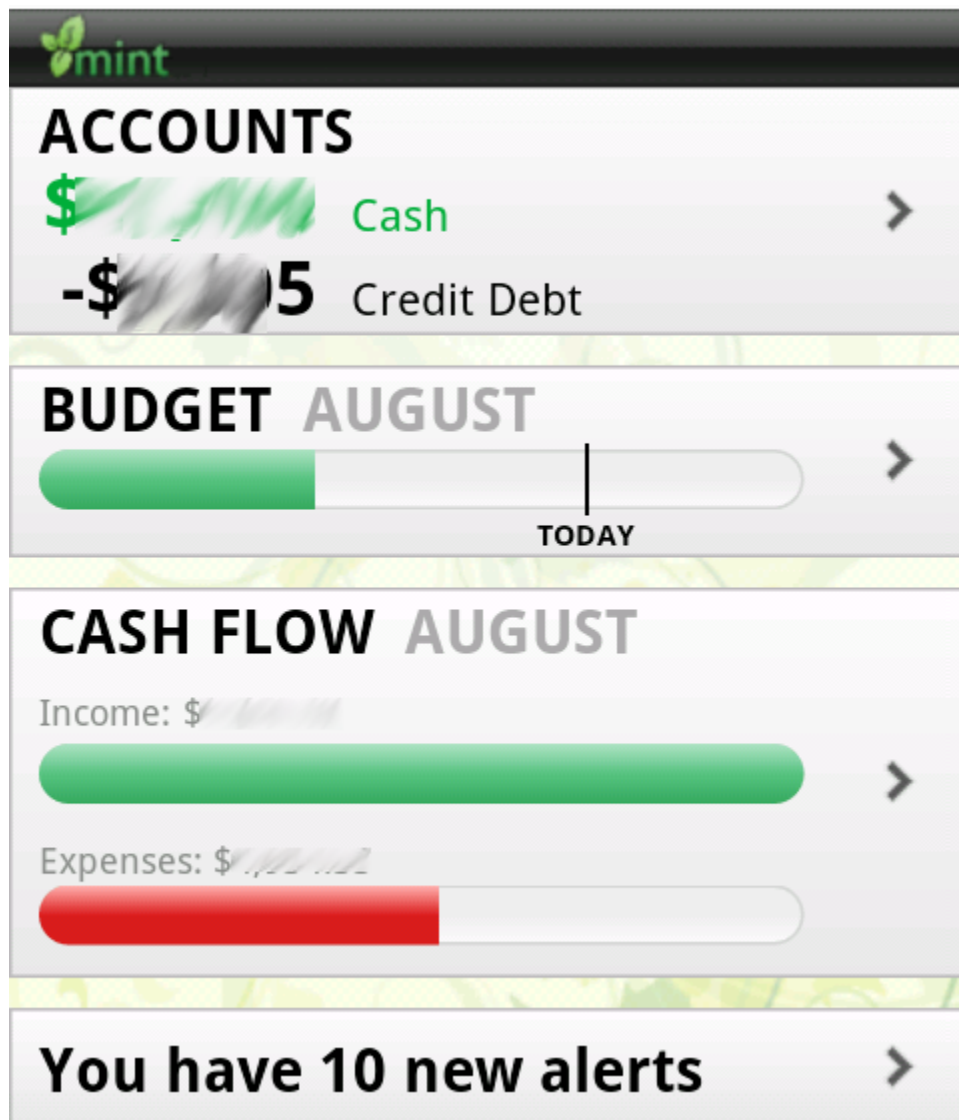
0:43/51:58



Google Listen

Google's own app for managing podcasts is very good at doing just that, but it's also a great audio search tool, in general. Want to keep up on the latest Android news? Search for "Android" or something more specific through Listen ("android gingerbread," for example), then subscribe to that search. When any radio show, podcast, or other audio file available to Google's massive index pops up with your topic, you'll have a chance to download it. In short, you'll never run out of listening material for washing the dishes. (Free)

Mint.com

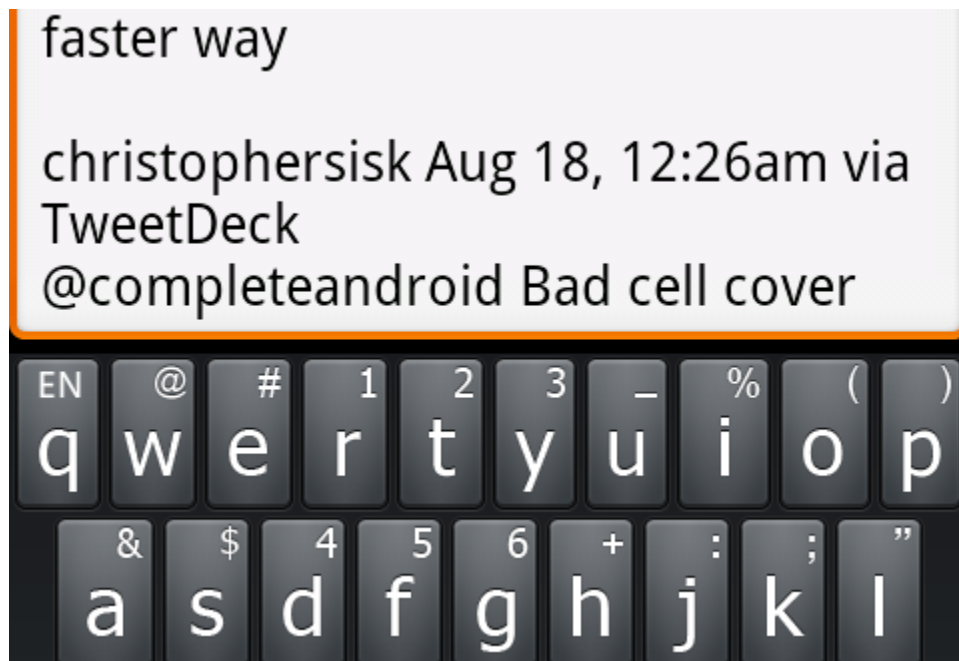


Managing Finances with Mint

At its core, it's mainly a mobile extension of Mint.com's fairly amazing personal finance manager, with all your bank accounts, credit cards, investments, debts, transactions, and other data locked in (to a fairly secure service, so far). Mint's Android app does more than just show you balances and budget amounts, though. There's a home screen widget that gives you at-a-glance access to account balances and other data, and you can have your system search tool work through Mint to index your recent transactions. In other words, type "Starbucks" into your search bar, and you'll get a chance to see

how scary your spending on fancy coffee has been these past few months. (Free)

mNote



mNote SimpleNote Client

Most Android phones don't come with a built-in note-taking app installed—they figure, it seems, that you'll just email yourself everything. Skip that nonsense by signing up for the web-based, constantly syncing Simplenote service at simplenoteapp.com, then grab the mNote app and log into your Simplenote account. Now you can take and read notes on your Android and from your browser, and whatever you type is saved automatically. (Free)

My Tracks



6:29 AM

Pick a track. Press&hold for more options.



Track 34 walking

Sat Aug 14 08:30:20 EDT 2010

30:36 1.13 mi



Track 33 walking

Mon Aug 09 15:18:45 EDT 2010

14:34 2144.13 ft



Track 32 walking

Mon Aug 09 13:55:08 EDT 2010

30:24 2283.97 ft



Track 31 walking

Sat Aug 07 19:45:33 EDT 2010

41:23 1.13 mi



Track 30 walking

Fri Aug 06 19:50:01 EDT 2010

42:41 1.83 mi



Track 42

Export all tracks

Delete all tracks

Whether you're into running, walking, biking, hiking, driving cross-country, or just tracking your mileage for fun, My Tracks has all the data and red-marker-traced maps you could want. Start the app and start recording before you head out on any trip, and your adventure gets tracked on a Google Map using our GPS connection. Along with that map, you get a detailed spreadsheet analysis of your elevation changes, minutes spent moving or still, averages, timings, and other data, all of which can be easily exported to Google Docs, Google My Maps, Google Earth, or straight database files. (Free)

NPR News



6:35 AM

Playlist



Active



Listened to



Supreme Court Hears Convicted
Enron CEO's Appeal



Hot Wings' Pain Now Felt By
Restaurants, Too



Lost iPhone The Real Deal, Gawker
Founder Says



iPhone Prototype Left At A Silicon
Valley Bar



Lost iPhone The Real Deal, Gawker
Founder Says

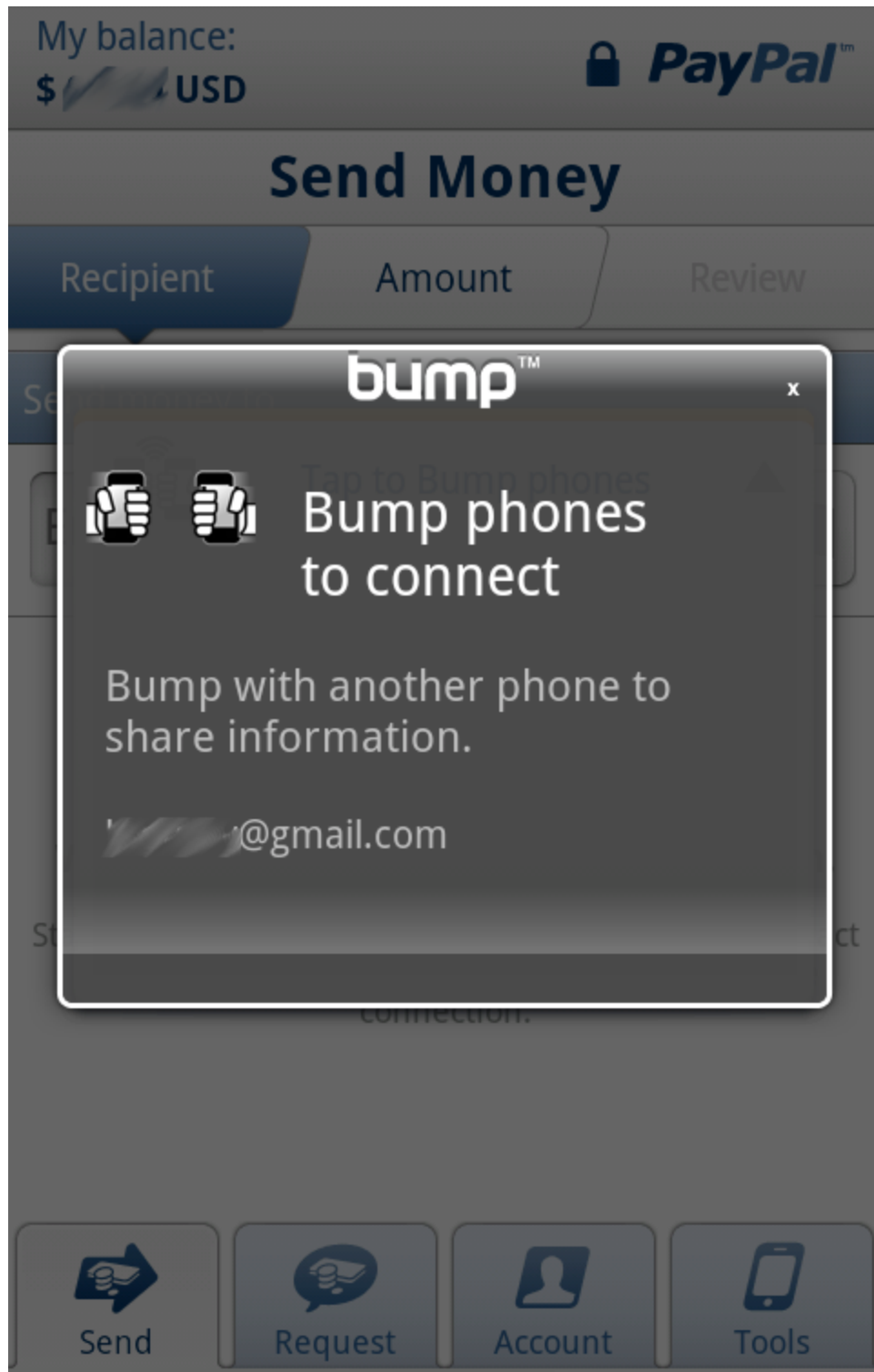


Father Plans To Sue CIA After Son
Put On 'Kill' List

Clear

Need your morning fix of National Public Radio's calm, slightly heady news and features, but find yourself far from good reception? Like all but one of the stories slated for All Things Considered this afternoon? The NPR app has you covered in both cases. You can straight-up stream your local NPR station over 3G or Wi-Fi, but you can also cherry-pick stories and segments from NPR news shows and create a playlist with them. It's also the place you can quickly download podcast recordings of popular shows like Fresh Air and This American Life. (Free)

PayPal



PayPal "Bump" Function to Send Money to Nearby Phones

The basic function of PayPal, sending and receiving payments for auctions and other transactions, is pretty neat to have on your

Android phone. The really cool part, recently introduced for newer phones, is the “bump” feature. Any PayPal user with a similarly endowed PayPal app—including iPhone users—can just bump their phone against yours with the app open, and you can settle your pizza or bar tab, even if your wallet's been long since lost, or the casino's cleaned you out twice. (Free)

PDAnet



PdaNet is currently turned off.
Please turn it on before
connecting from the computer
end.

Enable USB Tether

Enable Bluetooth DUN

Tethering a Laptop with PDAnet

Some Android phones offer USB tethering or “mobile hotspot” apps that turn your cellular connection into one your laptop, or a few friends' laptops, can all use. But that's usually far from free. PDAnet, a combination of Android app and Windows or Mac software, turns pretty much any Android into a mobile internet conversion center, offering connections over USB or Bluetooth. (Free app and software with non-secure access; about \$25, though sometimes on sale, for full features)

Pandora

The Disguise
Ornette Coleman
Something Else!!!!

**SOMETHING
THE MUSIC OF ORNETTE
ELSE!!!!
COLEMAN
CONTEMPORARY
S7551**

ORIGINAL
Jazz
CLASSICS
REMASTERED 1993

ESPN
SCORECENTER

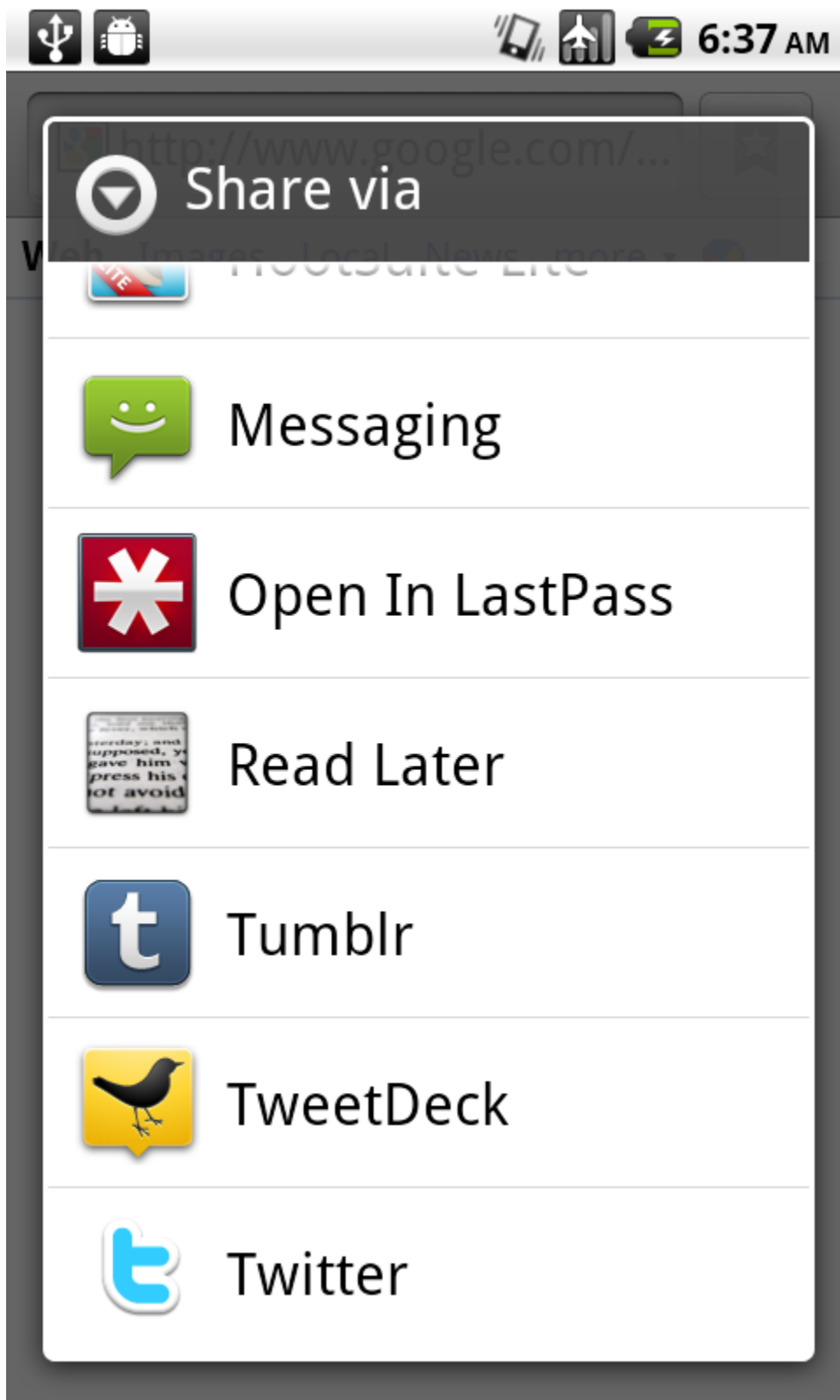
AVAILABLE FOR FREE
STAY UP TO
DATE ON THE GO.

⋮ ⚡ 👍 ⏸ ⏭

Streaming the "Thelonious Monk Station" on Pandora

It's hard to believe Pandora hasn't always been with us. You type in an artist, song, or genre you like (or a few artists, a few songs), and Pandora runs through its meticulously labeled and tagged database of songs to create a personalized radio station for you. On Android, it's an app that plays well in the background, so you can take a walk, clean the house, or continue your game of RoboDefense while hearing artists with similar qualities to Medeski Martin & Wood.

Read Later or PaperDroid



Sharing in Read Later

Long articles on the web are hard to get through—usually because when you find them, you're either supposed to be “just checking my email” or, you know, working. Web services Instapaper and Read It Later take in links you send them, strip out everything except the essential pictures and text, then keep your tightly focused pages in an account you can get to when you have time. Android apps Read Later and PaperDroid send browser pages to Insapaper and Read It Later, respectively, so you can get more text on your small-ish screen and save links you find that you can't quite read right now. (Free)

Shopper



6:38 AM

Shopper History



February 2010



HP 60 Print cartridge - Black - 2 Jul 22

Barcode: 883585702534



HP 60 Print cartridge - Black - 2

\$11 - \$34 from 242 sellers

★★★★☆ 42 reviews



Unknown product

Barcode: 490042707898

Apr 26



"garmin nuvi 1300"

Apr 17



Garmin nüvi 1300 - Hiking, au

\$124 - \$257 from 196 sellers

★★★★☆ 171 reviews



Unknown product

Mar 29



Search



History



Starred

Google Shopper "History"

Another Google-crafted app, this one makes you feel smugly superior to the store that wants to charge you \$250 for an LCD monitor you bet you can get for \$199. Take a picture of the product, or scan its barcode with Shopper, and you'll quickly get back a listing of online and retail stores and their prices for that item. It's also a lazy way to build a very specific wish list, since your history is saved in the app. (Free)

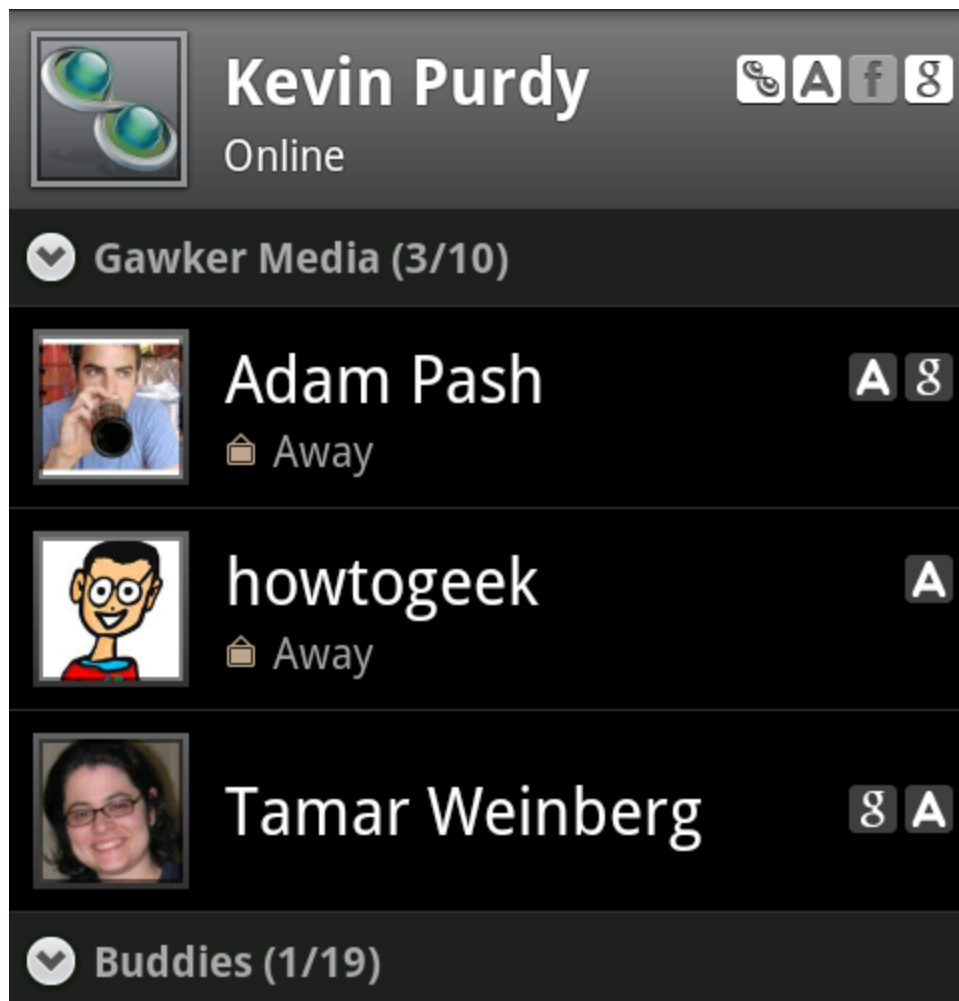
Tasker



Tasker Main Screen

It's not an easy-to-use app, but it is very, very, very powerful. Tasker is an automation engine for Android that can do nearly anything on your phone in any situation, if you set it to do that. Want your volume to jump down to an ear-friendly 50 percent when you plug in your headphones, and have a menu of audio apps to pop up? Tasker can do that. Want to send an automated SMS reply of "Driving right now" whenever your phone is docked? That, too, is totally do-able through Tasker. (\$6 through Market or Tasker web site).

Trillian



Trillian's Main Buddy List

AOL has its own IM app, and your phone came loaded with a Talk app for Google chatting. Oh, and there's Facebook Chat, MSN, and all those other IM accounts. Even if you've only got two chat profiles, give Trillian a try. It's a free app, currently in beta, that signs you in and notifies you of messages on all your chat accounts. (Free, in beta, through Trillian.com)

Triplt

The screenshot displays the Triplt app interface. At the top, a blue header reads "Training Seminar, LA" with the dates "Sep 14, 2010 - Sep 18, 2010" and the activities "training, meetings, sightseeing". Below this is a green banner stating "All Clear. TripIt Pro is monitoring this trip." The main section is a light blue list of events for "Sep 14, 2010". The first event is a flight from London to Los Angeles on Virgin Atlantic Airways #7, departing at 11:50 AM BST. The second event is a map of Los Angeles, CA, at 3:15 PM PDT. The third event is directions from LAX to a destination, starting at 3:20 PM PDT. Each event is preceded by a small icon: an airplane for the flight, a map for the map, and a location pin for the directions.

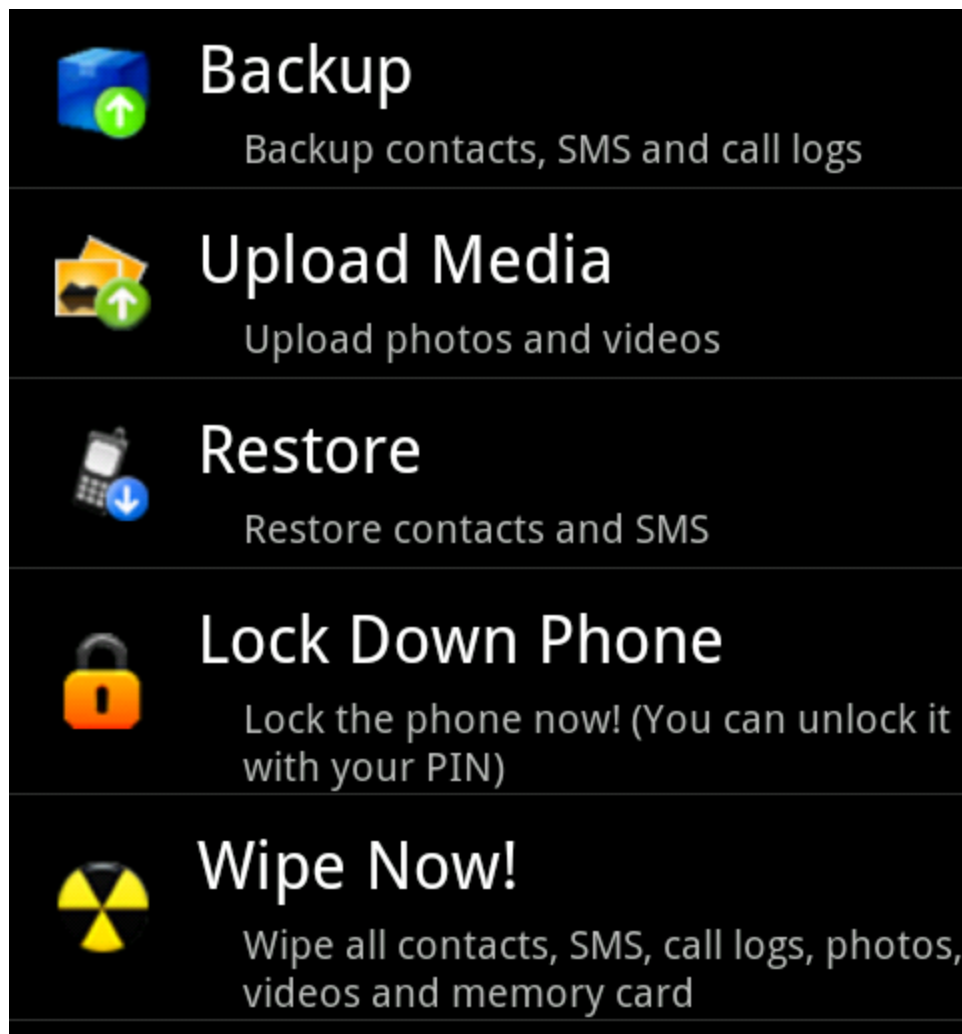
Time	Activity
11:50 ^{AM} BST	London to Los Angeles Virgin Atlantic Airways #7
3:15 ^{PM} PDT	Map of Los Angeles, CA Los Angeles, CA
3:20 ^{PM} PDT	Directions from LAX to ...

Travel Itinerary Details in Triplt

Put simply, Triplt takes in all those overstuffed emails confirming your plane tickets, your hotel room, and your car rental, then turns them into an elegant itinerary with helpful links and information—like the fact that it's supposed to be 58 in Seattle this Friday, and it's 20 minutes from the airport to your hotel in rush hour traffic, so you'd better wear a coat and call for a shuttle. The Android app for Triplt

just formats all those links and data into a phone-friendly scroll.
(Free)

WaveSecure



Main WaveSecure Security Options

What happens if you lose your Android phone? Good question. If you haven't locked it down at all, you're at pretty bad risk of having the person who "finds" it get access to your Google and other data accounts, plus your SMS history, call logs, and contacts. If you've installed WaveSecure and kept an account going, you'll always have the ability to remotely lock down your phone, send a "Please return


me” message, track its whereabouts through GPS, and wipe it out completely if all else fails. Plus, the app has a handy data backup system that you can use in less dire times. (Free with 7-day trial, about \$20 per year for service).

Yelp

Filter

Restaurants

Map



1. Bacchus Wine Bar & ...

★

★

★

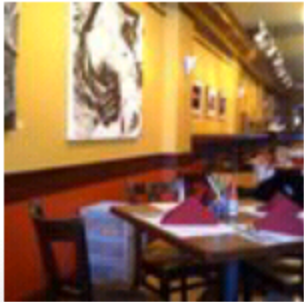
★

★

20 Reviews

54 W Chippewa St

American (New) \$\$\$



2. Merge

★

★

★


★

★

27 Reviews

439 Delaware Ave.

Food \$\$



3. Towne Restaurant

★

★

★

★

★

25 Reviews

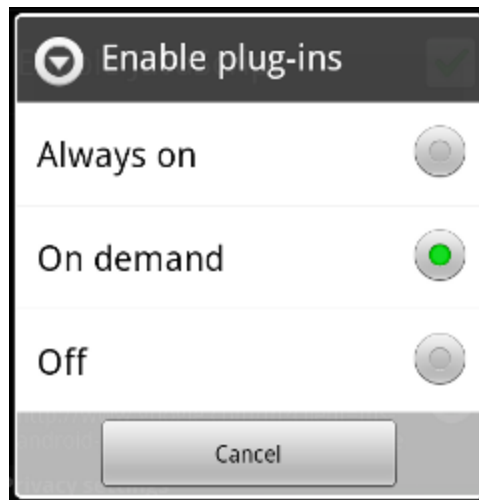
Nearby Restaurants on Yelp

Yelp's become the de facto repository for people's thoughts on restaurants, gas stations, plumbing services, and other businesses. In the midst of all that opinion, the service has also become a really handy place to find out what's right near you. Load up the Yelp app

on Android, and it's easy to find a thin-crust gourmet pizza spot right around the corner from where you're wandering, and read that, although it sounds amazing, the calamari pesto pie is probably something to avoid.

Tutorials: Annoyance Fixes

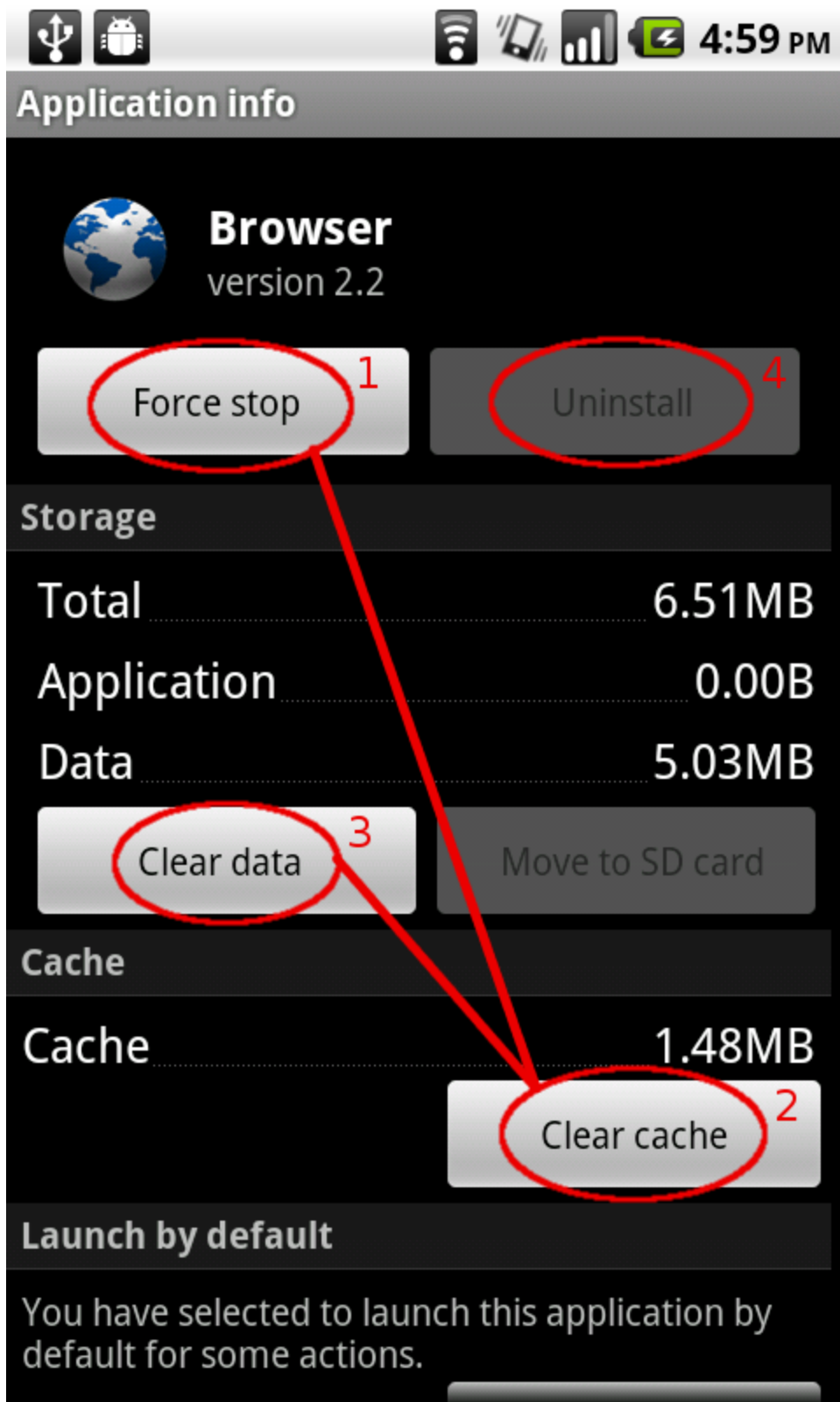
Flash Ads and Movies Are Slowing Down Web Pages, Are Extremely Annoying



Making Flash a more selective thing

We hear you, believe me. To make your browser less "Flash"-y, open up the Browser, hit the More button, then choose Settings. Scroll down to find "Enable plug-ins," then pick the "On demand" option. Now you'll see a downward-facing green arrow on the parts of a web page where a Flash element would normally launch from. Click that arrow and that page, that page alone, has permission to load Flash and get all interactive with you.

This One Application Crashes Every Single Time



The four-step fix for any app that's causing problems.

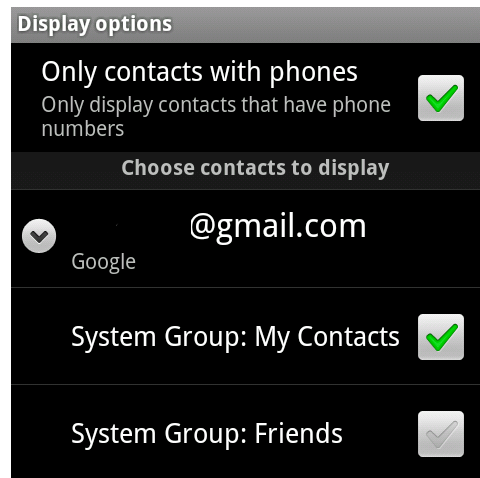
Any long-term Android user (or any smartphone owner, really) knows this frustration--one app, for no particular reason, decides it doesn't like you, so it crashes. It crashes when starting up, maybe, or whenever you try to do this one particular thing. There's usually a fix, though, and it's found in your Application settings.

Hit your Menu button while on your home screen and choose Settings, then pick the Applications category. Next choose "Manage applications," and click on the tab at the top that reads "All." Scroll through the alphabetical list to find the app you want to triage.

If you haven't restarted your phone in some time, sometimes you only need Step One: "Force Stop." Hit that button, then head back to the app to see if it's behaving. If it doesn't, head back into the app settings and click "Clear cache." That wips out all the temporary data an app was holding to speed things up. Still no go? Move up to "Clear data," which will wipe out nearly everything the app was storing that could be problematic--including your username and password, potentially, so be aware.

No luck at all with these fixes? Hit the Uninstall button, then head back to the Market and grab the app again. Paid applications are free to re-download from the Market, so you've usually got nothing to lose.

My Contacts are a Mess



Cleaning up the Contacts list

It's certainly not a problem unique to Android, but the way your phone syncs the people on your SIM card, in your Gmail account, on your Facebook and Twitter profiles, and from whatever other accounts you've loaded in gives you a lot of hay to make. We've covered this in the chapter on [Making Calls, Sending Texts, and Managing Contacts](#), but here's the quick way to get at your power tools.

First thing's first: open your phone app, then click the Contacts tab. Hit your Menu button, then choose Display options. Now you've got a few ways to pare down your big list. Check "Only contacts with phones" if you don't want to see folks you only know through email, Twitter, or without phones listed in Facebook. On phones running Android 2.2 or later, you'll have options to sort by first or last names, along with changing which name goes first in the list.

Below those options, you've got all the accounts synced up to your contacts: Gmail, Google accounts, Facebook, Twitter, etc. Your email accounts will give you the power to choose only certain groups of contacts, like "My Contacts," "Family," and the like, to show up as phone contacts. Twitter and Facebook can be synced or un-synced from here, too.

If your problem is more about duplicates, wrong information, and other contact details, you'll want to fire up a laptop or desktop computer. From browser, head to google.com/contacts, log into the account you set up with your phone, then get to work searching, editing, and consolidating duplicate contacts. The ins and outs are, once again, covered in our chapter on [Making Calls, Sending Texts, and Managing Contacts](#).

It Takes Forever to Get at My Music, Pictures, and SD Card Files



What you want to happen when you connect your Android to your computer's USB

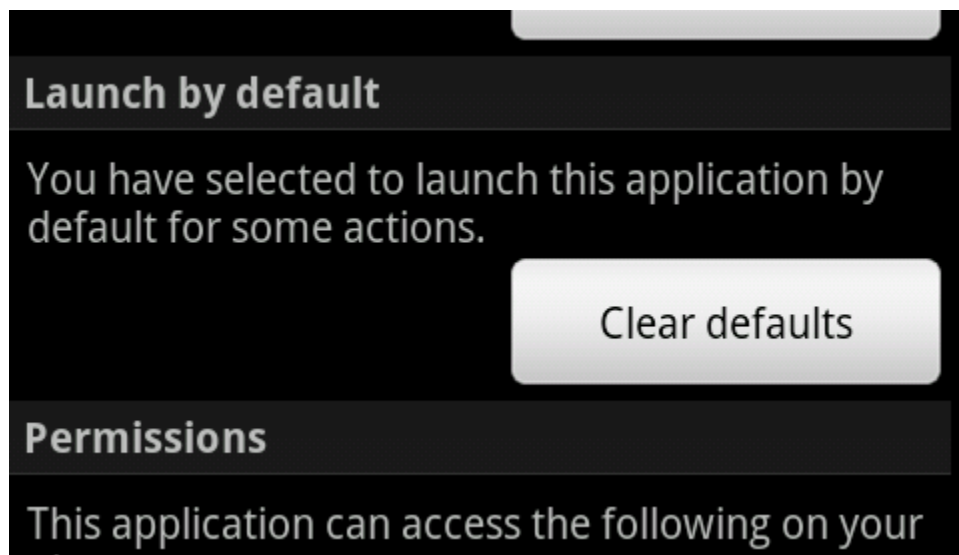
Many phone manufacturers, HTC and Motorola included, have created Windows and Mac software apps to handle the transfer and

backup of SD card files for their phones. Some, like HTC, have even taken the step of having your phone ask you what you want to use your USB cable connection for--charging, syncing media, straight-up storage access, or data connection tethering.

If your phone didn't come with that software, you can still skip the process of plugging, clicking two buttons on your phone, then telling your computer what to do from there. We describe the options in the tutorial on [Getting Music, Pictures, and Other Files On and Off Your Phone](#), but here's the short version. Open up the Market and search for an app named **Auto Mount Your SD Card**. Install it, and when you plug your phone into your computer, you'll instantly see your phone as a disk drive you can access.

You might avoid this step, though, if you've moved certain applications over to your SD card, or mostly plug your phone in for charging. Otherwise, it's a handy hack that saves you a few steps.

I Don't Want This One App Always Launching When I Do This Thing



Removing a Default Automatic Launch

This happens often with apps you download from the Market to boost your SMS, music, YouTube videos, what have you. Normally, you get a screen asking you to choose an app for an action, as explained in the chapter on the [Market & Apps](#). If you've somehow set an app to be the default for something, and you want your freedom back, head into your Settings by pressing the Menu button on your Home Screen. From there, head into Applications, then click over to the "All" tab. Find the app that's hijacked your one action, press on it, then look for the "Clear defaults" button. That frees up your phone to ask you once again which app you want to do something the next time you do it.

No computer or video player can read my video files

Some Android phones record their video in a very particular (read: annoying) format and file extension, 3GP. Not many devices can read it natively, and some only handle just the audio or just the video, so you'll need to convert it.

On Windows computers, you can grab a free copy of FormatFactory (pcfreetime.com), a very straightforward media file converter that can handle anything you throw at it. Install FormatFactory, open it up, then drag your 3GP file, or multiple files, into the empty queue section. You'll be asked what kind of format you want to convert your file to. Selecting "All to MOV" has, in light testing, tended to be a fairly universal output that plays on Windows, Mac, iPods, and other Android phones, too.

On Mac or Linux systems, there's Handbrake (handbrake.fr). It's available for Windows, too, though FormatFactory is easier to use. Load up Handbrake, then use the button in the upper-left to select your 3GP files for conversion. Pick the Apple or MOV option, add any other 3GP videos you want to convert, then start your queue. The files that come out should be perfectly playable in any device.

It Feels Like I Can't Control the Volume

That's totally understandable. If you looked in the guts of your system, you'd see that there are at least half a dozen individual volume levels for incoming calls, notifications, alarms, media apps, text-to-speech, and other functions. You can make them more manageable, though, with a few settings, and perhaps an app or two.

In your Settings, head to “Sound,” or possibly “Sound & Display.” You'll see an entry for Volume on most phones, though the Motorola phones often break their volume controls up individually. In the “Volume” or “Ringer Volume” entry, check the box that reads “Use incoming call volume for notifications.” That simplifies things a little bit—if you turn your phone to vibrate, your email and text notifications now won't sound off on their own.

You may be afraid to set your phone to “Silent mode,” the setting that's all the way at the bottom if you keep clicking down on your volume buttons, because you think you'll miss a call. You can keep your phone vibrating while silencing all audio output, though. If you have a “Vibrate” or “Phone vibrate” option, check it to come to a new understanding with your phone—I still want to know if my wife is calling me to please, please remember to pick up eggs, but I don't want a sonar ping just because someone RT'ed my Mr. T joke.

Those controls are, admittedly, still pretty meager. For more fine-tuned control of your audio levels, try the free Automation apps like Tasker and Locale, too, can set up profiles to turn all sounds down after a certain time, or in certain phone situations.

My Friends All Have This Kind of Fuzzy Halo Around Them in My Shots

Give the plastic or glass over your camera lens a good wipe with a microfiber cloth, or a very soft cotton T-shirt—that honestly solves the problem more often than not, in this author's experience. If you're still getting the Smudgy Halo look, take off your battery cover and examine the actual camera lens. Using a very gentle hand with that microfiber cloth, or with camera lens cleaner that you should totally invest in, gently clean out the crumbs, dust, and other stuff that's snuck into your phone during all its time in your pocket.

This App I'm Downloading from the Market is Taking Forever, or Never Finishes

That happens on occasion, and it seems very random. In our experience, you should cancel the download by pulling the Notification Bar down, pressing the download notification, then clicking the Cancel Download button in the Market.

If you were on Wi-Fi, switch to your cellular connection. If you were on your mobile data connection, try switching to Wi-Fi. If that doesn't do it, wait a bit, like 30 minutes, and try again. From there, you can try rebooting your phone and giving it a good college try once more.

Still no luck? Check to see if the developer offers the app on their own site as a stand-alone download—many developers keep their apps up on the Google Code platform, and others may have a blog where they post early-release files in the .apk format. You can download these .apk files, then click on them from the “Download complete” notification, or using a file manager like Astro File Manager, to install them.

When all else fails, wait a day or two and see what happens. If you still can't get through, email the developer from the link on the Market page.

Tutorials: Getting Music, Pictures, and Other Files On and Off Your Phone

Before we jump into the goodies of pictures, music, videos, and other goodies, you'll probably want to know how to get all of that stuff onto and off of your phone. Android offers a few different ways to export your stuff, but the main route is a USB connection. It's not a "sync," a la iTunes/iPhone setups. You're basically turning your phone's microSD card into a little USB drive for your computer to use.

Note: Wireless, no-cord-needed syncing of music and pictures is something Google's announced for a forthcoming Android update, so this is one of the sections most likely to need an update sooner than others. But given the feeling of clicking a button to send The Police's entire catalog to our phone, we won't complain--much.

The Basic USB-to-Computer Setup

Your phone should have come with a USB cable--one end a square USB plug that should look familiar, and the other a tiny plug that fits somewhere on your phone. If not, you can obtain one very cheaply, and cheaper still online--check to see if you have a Micro-USB or Mini-USB plug (Mini is thinner), and head to a vendor like [MonoPrice](#) to find a USB-to-Micro or USB-to-Mini cord.

Your phone likely came with a small, but free, microSD card already inside--though we'll just refer to it as your "SD card" from here on out. You can, of course, replace it with any sized SD card you'd like, with your owner's manual explaining the eject and insertion processes. As soon as your SD card is inside your phone, I'd recommend formatting it using the phone itself, unless there's already data on it.

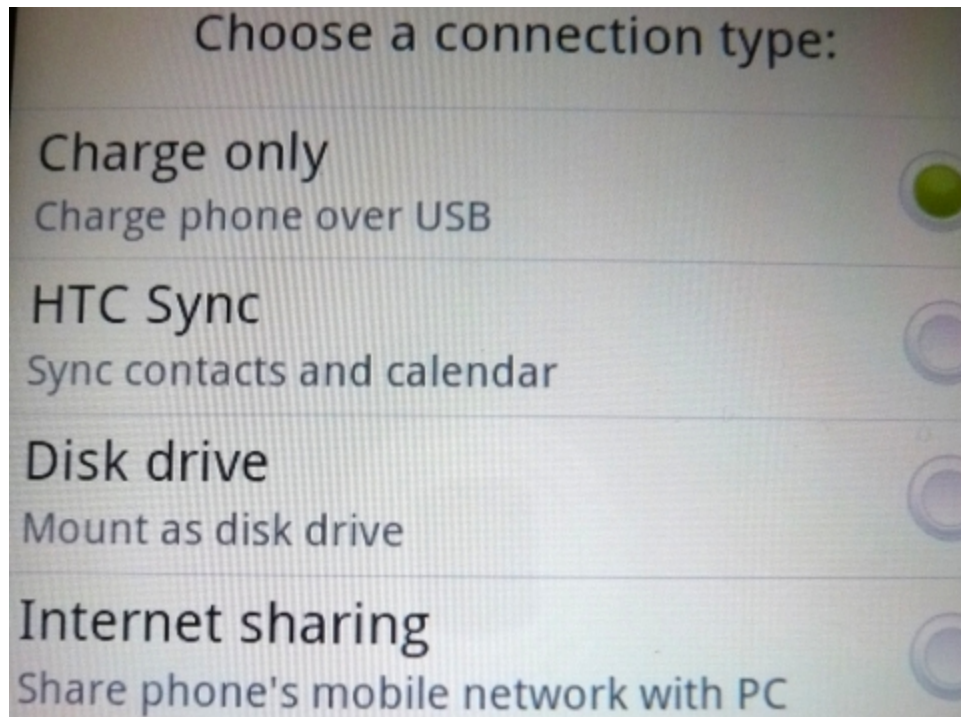
Formatting a New SD card

To format your card, press the Menu key on your home screen and select the Settings, scroll down to select "SD card & phone storage" (or something akin). In this page, you'll likely see only an option to "Unmount SD card," because the phone can't do much while its contents are accessible to your apps. After the card is unmounted, an option to "Format SD card" will appear. Go ahead and hit the button, assuming, again, that there's nothing on it. After the format finishes, the phone should automatically remount the card. If not, go ahead and do it yourself from this screen.

Mounting Your Phone on Your Computer

Plug your USB cable into your phone first, and then, when your desktop or laptop computer is booted up and running, plug the other end into an empty USB port on it. Most laptops have USB ports on their sides, while desktops often have ports on the front of the case, in the rear, and, occasionally, on the keyboard.

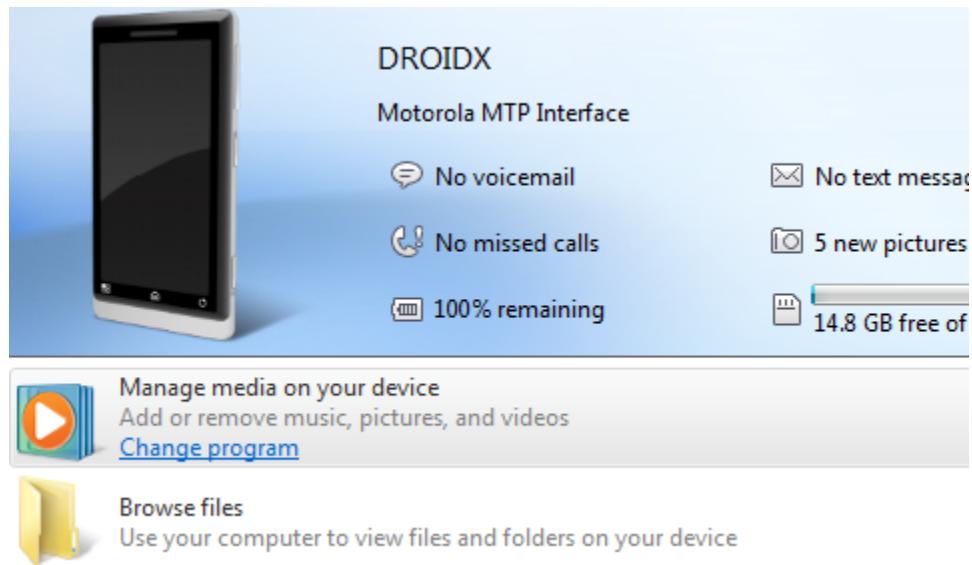
If you've got an HTC phone, you'll likely get a prompt right on your Android, asking you what type of connection you'd like to make between your phone and Android:



Mounting Options on HTC

They're fairly self explanatory: charging your phone, syncing your media with HTC's own app, and mounting your phone's SD card as a storage device on your computer, which is what we're really after. "Internet sharing" converts your cellular data connection into a connection your computer can use, if you've paid the extra per-month dough. Select "Disk drive" to try out moving files between your computer and phone the manual way, which we're doing in this chapter.

On Motorola's phones, like the Droid X, there's an app that they really want you to install on your Windows or Mac system, and it makes sense to do so. It pops up whenever your Droid phone is detected:



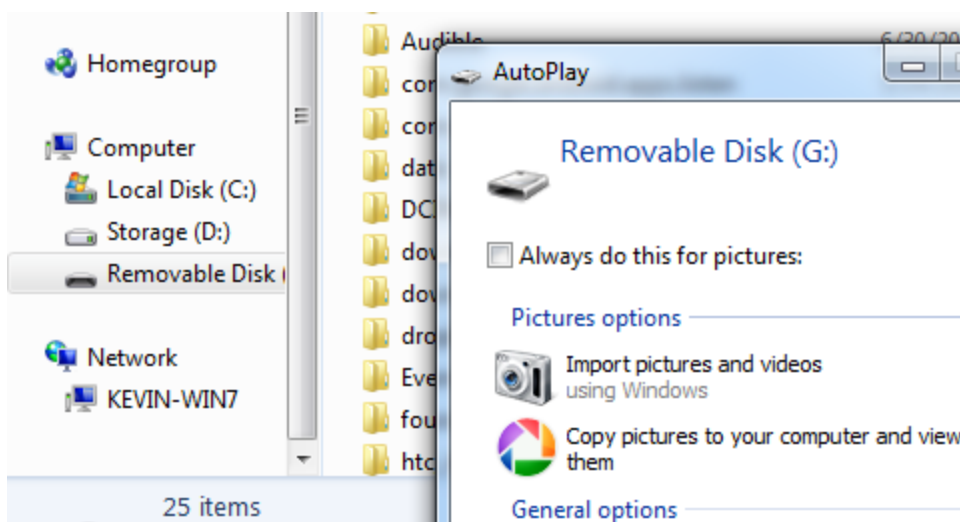
Windows/Mac App that senses your Android is connected

From here, you can see everything that's changed on your system since you last synced it, but what we're looking to do is “Browse files.”

If you're using a phone with the standard Android interface, or no special syncing app, what you'll see when you plug in your phone is ... nothing. What gives? Well, your phone is actually waiting for you to confirm that you want to use this USB connection to access files, not just charge your phone. Most modern USB ports provide both a light stream of power and a data channel to devices, so if you're away from your wall charger, you can give your phone a small battery boost with your computer. Good reason to keep an extra cord at the office, really.

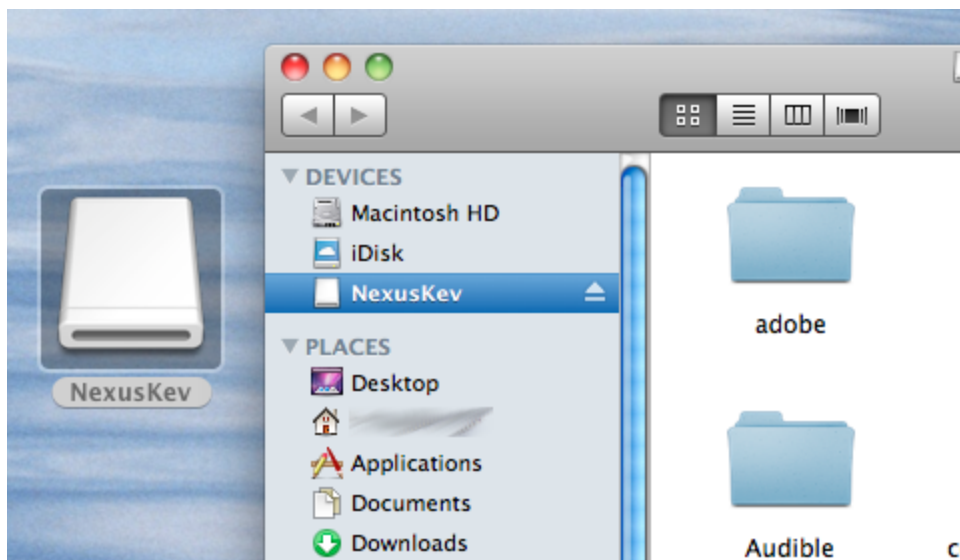
To put music on your Android, and pull pictures or videos off of it (or vice-versa), hit the “Turn on USB storage” button you see at the bottom of your Android unit when you plug it in. After pressing it, the Android will turn orange, a “working” wheel will spin for a bit, and your computer will likely ping you about a new storage device being available.

If you've ever plugged in an external USB drive, or a little thumb drive, you've seen something similar. On Windows, you'll likely be asked what you want to do with the drive, depending on what's on it, and you'll also see a new "Removable Disk" in the left-hand panel of your explorer windows. In my case, it's a lot of photos, so Windows wants to be smart and beat me to the picture-pulling punch:



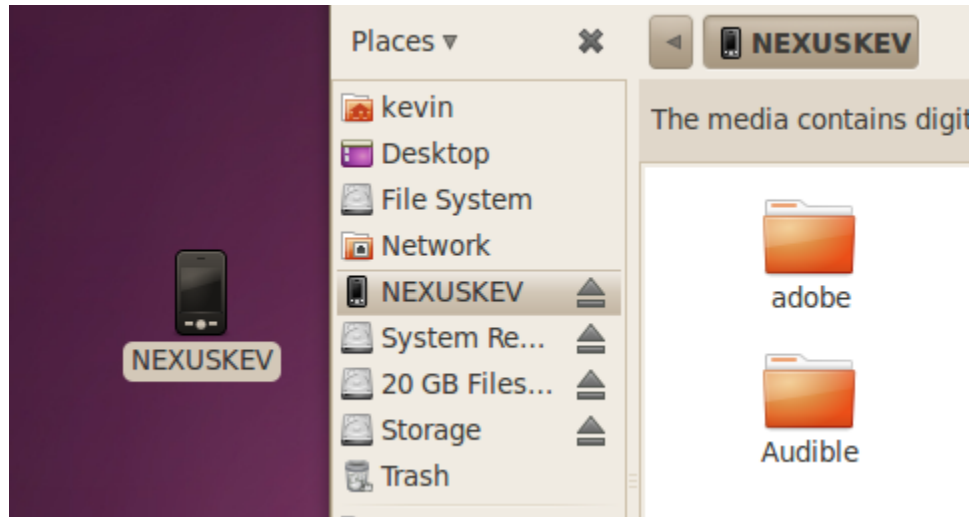
Import Options Popping Up on Windows

On a Mac, you'll see a new drive icon on your desktop, as well as in Finder's left-hand "Devices" listing.



Android on Your Mac Comes Up as a New Drive and in Finder

Meanwhile, a Linux operating system, like Ubuntu, recognizes its Linux-powered brethren more specifically, but mounts it in similar fashion--as just another USB-connected storage device.



Android Connected to Ubuntu

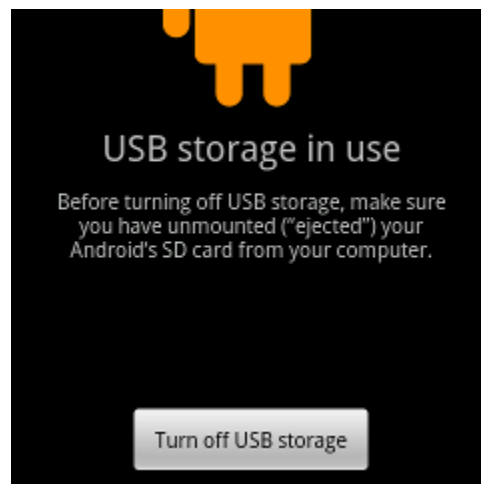
Now anything on your phone's SD card is there for the taking, and you can drop anything you'd like onto your phone's storage.

We'll cover more about managing your photos, music, and video in their own (short!) chapters, but here's the hit list of locations:

- **Documents:** Files that you've downloaded through your browser are in a "downloads" folder, while files you've pulled down from the (awesome) Dropbox app are in (surprise!) "dropbox." You can build your own distinct folders ("pdf," "Sanderson Project") wherever you'd like, though we'd recommend getting an app like Astro File Manager to navigate and launch them.
- **Music:** You can keep your music anywhere you'd like, because music players can find your tracks anywhere on your SD card. Still, for organization's sake, "music" or "Music" folder, with sub-folders arranged by artist, seems to make sense. If you've purchased music through Amazon's MP3 Store app, you'll find those tracks in an Amazon MP3 folder, organized by artist.

- **Pictures:** Those taken by your phone are in the “DCIM” folder, then usually in a “Camera” folder inside that. Photos are named by the time they were taken: IMG_20100614_164117.jpg was taken at 4:41 and 17 seconds (using a military-style 24-hour clock) on June 14, 2010. Most photo organizing applications will handle a USB-connected Android phone just fine, and be able to import your photos in smart batches.
- **Videos:** The videos your Android camera shoots are, unfortunately, saved in a 3GP format that not every computer knows exactly what to do with. Some photo or video players know what to do, like [the VLC Media Player](#) or Google’s own [Picasa](#) photo organizer, both available for Windows and Mac (and, for VLC, on Linux, too).

Safely Unmounting Your Phone from Your Computer



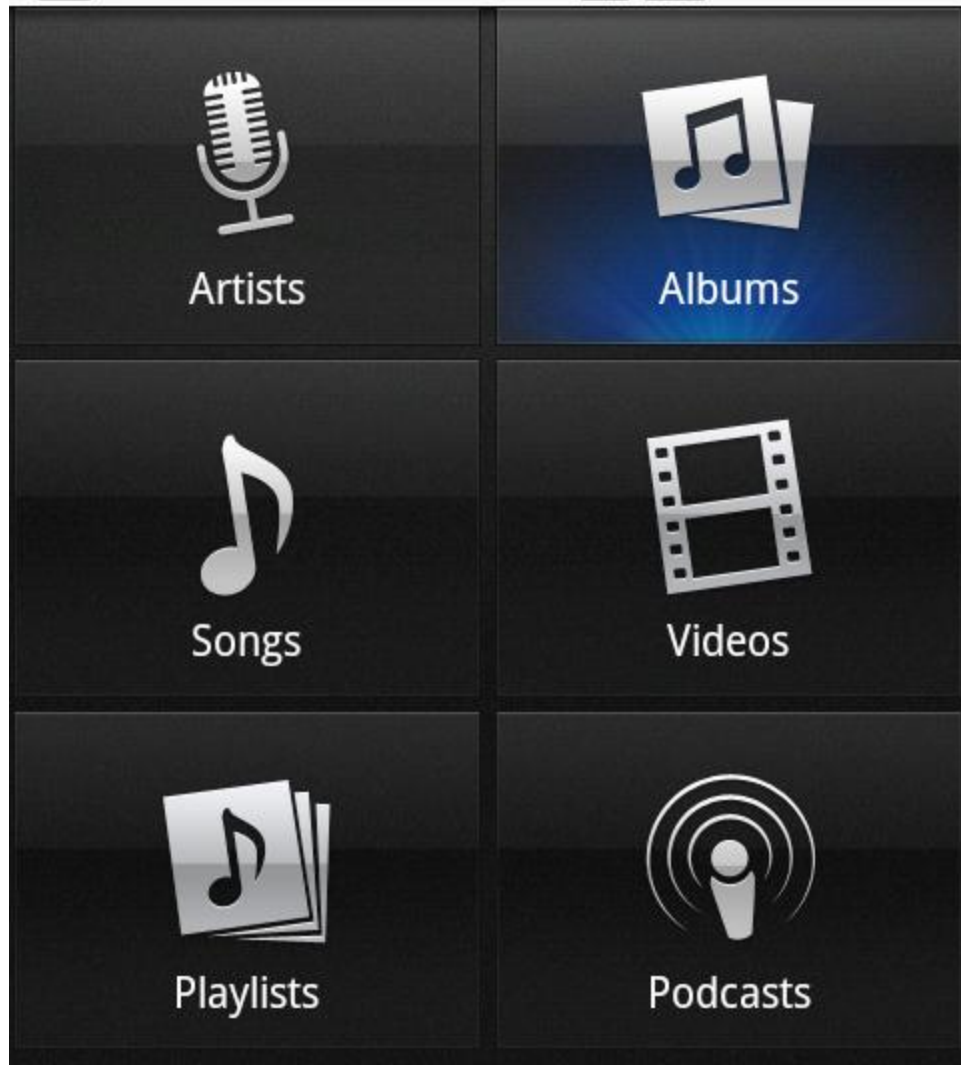
Reminder on Safely "Ejecting"

After your computer has declared itself done, you'll then have to hit the "Turn off USB storage" button on your phone, so it knows it's safe to re-mount your SD card. And you're back on your way again.

Skip the Mounting Process with Auto Mount USB or doubleTwist

Having to press a button on your Android, then open a folder, then move your files, then eject your phone from the computer, then press another button on the phone--it's a lot of annoying requirements just to pull out your latest photos or add some music. If you'd like an easier way, consider installing a tiny app, "Auto Mount USB," or the doubleTwist media syncing app, for faster access.

Auto Mount USB is a tiny program, free in the Market, that does one thing and one thing well: automatically mount your phone's SD card as accessible storage when you're plugged in via USB. If you don't want to access your phone's internals, just eject the phone's storage from your system. This gets a bit problematic on a Mac, though, where you're cautioned constantly to always do a "safe" eject of drives. If you've got an HTC or Droid phone that handles the mounting options for you, it might also not be a necessity.



DoubleTwist Syncs Well with Your Computer's Media Library

DoubleTwist offers Windows and Mac software that's the closest thing to what many have called "iTunes for Android"--a media manager that makes syncing new music, pictures, videos, and podcast episodes onto your Android fairly easy. But there's also a [doubleTwist Player app for Android](#) that, when installed, adds a quietly great feature--automatically connecting to a computer for storage access, rather than waiting for you to press the button. If you've got doubleTwist installed on your computer, that software will open automatically, too, when you connect.

Then again, if you like using your USB cables to charge your phone, and don't always want to have to turn off USB storage or shut down doubleTwist, this might not be the combo for you. For those who'd like a more iTunes-like, instant-on sync setup, though, it's the way to go.

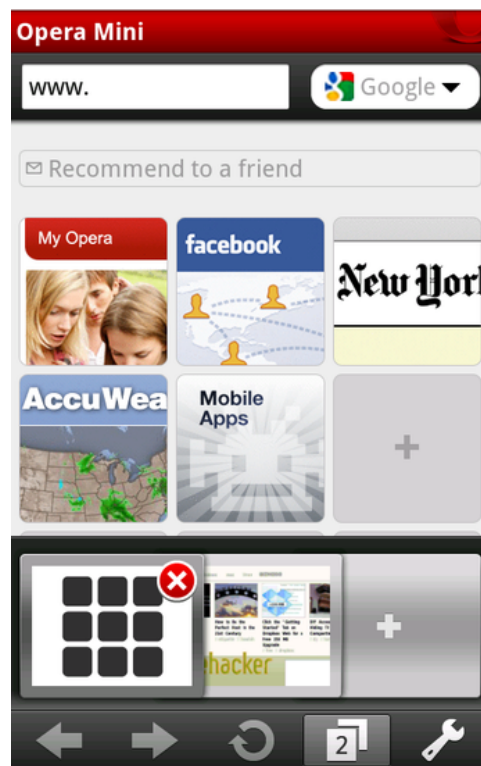
That's the gist of getting files on and off your Android, but it's how you make use of those files that really matters. Onto the fun stuff.

Tutorials: Great App Alternatives for Your Phone

The nice thing about the Android OS, as opposed to most smartphones, is that if you don't love the browser, the music player, the camera controls, or even the basic home screen of your phone, you can change it. Here are some of the best alternatives for the most important functions on an Android phone:

Browsers

Opera Mini

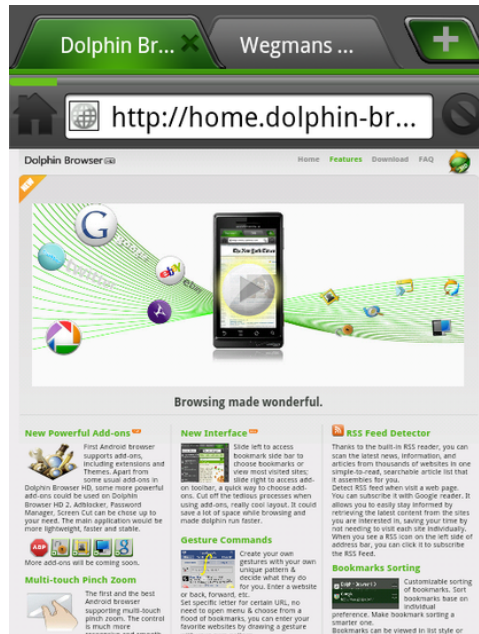


Opera Mini "Speed Dial" Home Page and Tab Picker.

[Opera](#) is no newcomer to the browser market, and has long offered strong mobile browsers. What sets their Android offering apart from the stock browser, or any other browser, is the server-side caching of data that speeds up page loading. Rather than visit the ESPN home page and wait for all the data from it to transfer to your phone, Opera's browser pings a server run by Opera, that server compresses the images and other data, then sends the smaller package to your phone. The compression usually isn't too grainy, and the speed really shows when you've got a less-than-optimal connection on EDGE or GPRS.

Opera's not too shabby looking, either. Your default home page is a "Speed Dial" of your most-visited sites, or whatever sites you want to assign. Switching between tabs happens in a pop-up switcher that provides a decent preview of each widows' contents. The split between the address bar and search bar, too, might find fans among those not enamored of the single-purpose field in the default Browser. (Free through the Market)

Dolphin / Dolphin HD



Dolphin HD with Two Tabs Open

The Dolphin browser made its mark as the first Android browser to offer an iPhone-like pinch-to-zoom finger capability. Though that's now a built-in function of the standard Browser, Dolphin's continued to add in features that set it apart.

Dolphin's tabs, or windows, group at the top of the browser, like most modern desktop browsers, but they disappear as you move around a page. The interface itself has few buttons or menus, and instead relies on your fingers. You "flick" left and right to move between pages, and can assign particular gestures to launch by clicking a button in the bottom-left corner and drawing a figure or letter. Scribble in a "G," for example, and you head to Google. "F" launches Facebook, an up-pointing arrow flings you back to the top of the page without having to scroll, and so on.

If that wasn't enough, Dolphin can also download YouTube videos to your SD card and make them viewable at a later time, whether or not you have Flash installed. Finally, there's a growing pool of add-ons for Dolphin, including ad blockers, RSS "feed" readers, tools to send pages to services like Read It Later, and other intriguing tools. (Free

through the Market, with ads removed by buying a "\$5 "Dolphin License" app)

SkyFire

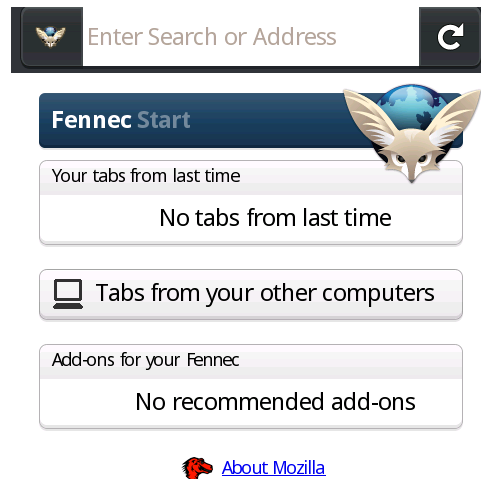


Loading a Flash Video Through SkyFire

SkyFire's main claim to fame is its ability to play the web's streaming videos, whether at YouTube or elsewhere, regardless of whether your phone supports Adobe's Flash player. Like Opera Mini, SkyFire uses its own server computers to tackle this, sending the video link out, compressing the stream, then sending it back to your browser. So if you're hanging out with friends and absolutely **need** to show them that awesome clip from the [Onion News Network](#), you can do so whether or not your phone maker has gotten down with the early 20th century.

Along with that notably neat feature, SkyFire also runs pretty well in general, based on the same code as the Android and iPhone browsers, and offers a quick-switching function to toggle between a web site's full version and its mobile-friendly view. (Free through the Market)

Mozilla Fennec / Firefox Mobile



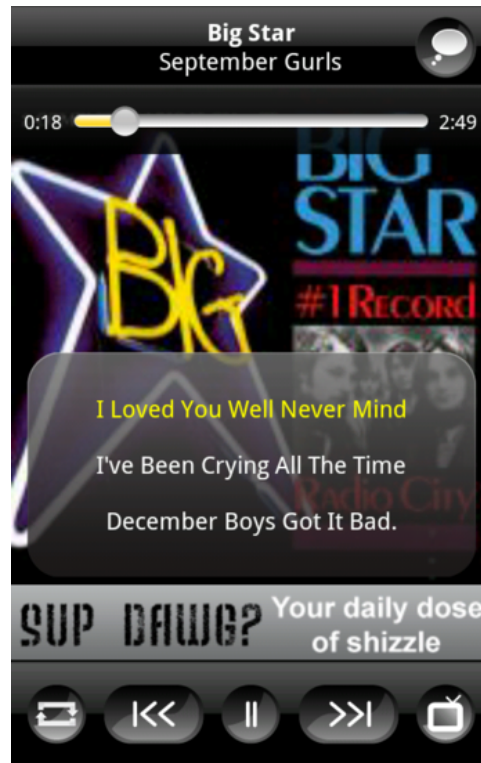
Fennec's Home Page

Fennec, the code name for [Firefox Mobile](#), is still a work in progress as of this writing. But even in its very rough, kinda-sorta works phase, it's a promising browser to come. Fennec will feature the same kind of add-on extensibility as Firefox on the desktop, but will also sync up smoothly with your personal Firefox browser.

Say you're looking at flight information in a few different tabs on your MacBook at home--ticket confirmation, airport status, the weather in your destination, and so on. If you've signed on through Mozilla's [Sync service](#), you can pull up all those same tabs, just as you left them, on your Android phone through Fennec. The interface looks pretty neat, too, and we're excited to see what add-ons are available at Fennec's official launch. (Free through Mozilla's site).

Music

tuneWiki



tuneWiki Rocks Out to Bell, Chilton & Co.

If you're the guy or gal whose friends make fun of them for thinking Rusted Root had a big hit in 1995 with "Simeon the Whale," you need tuneWiki. Besides doing everything the basic Music app does with a better look, tuneWiki's marquee feature is grabbing the lyrics to the songs you're listening to as you listen, then scrolling them on the screen in time to the music. In other words, enough time with tuneWiki means your next karaoke performance will be, say, 20 percent more inspired.

Along with the lyrics, tuneWiki also lets you get more social. You can share the tracks you're listening to on Facebook or Twitter, or even share your general location and current track with other tuneWiki

users. Finally the app comes with a built-in streaming radio tuner, along with links to YouTube music videos for tracks, when they can be found. (Free in the Market)

Cubed



Cubed's 3-D Music Visualization

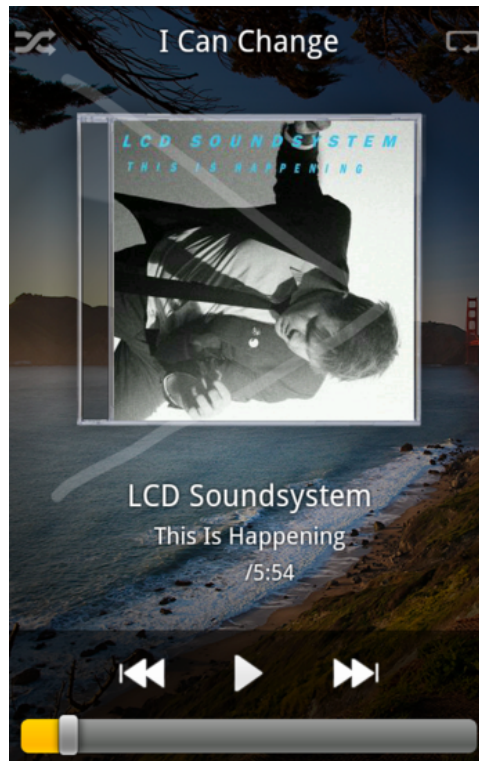
An amazingly cool app that's flying very much under the radar, "Cubed" hits the center point between the music nerds and the "just works" crowd. In its menu is the uber-helpful "Get album art" button, which simply scans the web for the album covers of all your tracks. It uses those to form the default "cube" view, which you can spin vertically or horizontally to change artists, albums, or songs.

There's a "scrobbler" that reports what you're listening to through music recommendation service Last.fm, and another plug-in available in the market, Concerts (cubed), that pings you if any of the

artists you're rocking out to happen to be playing a show nearby. The controls are big enough, and once you get used to the cube view, you'll feel like the default Music app is just too ... flat.

To grab Cubed free from the Market, search for "filipe abrant³," because it's hard to enter a superscript "3" into the search. (Free through the Market)

Music Mod



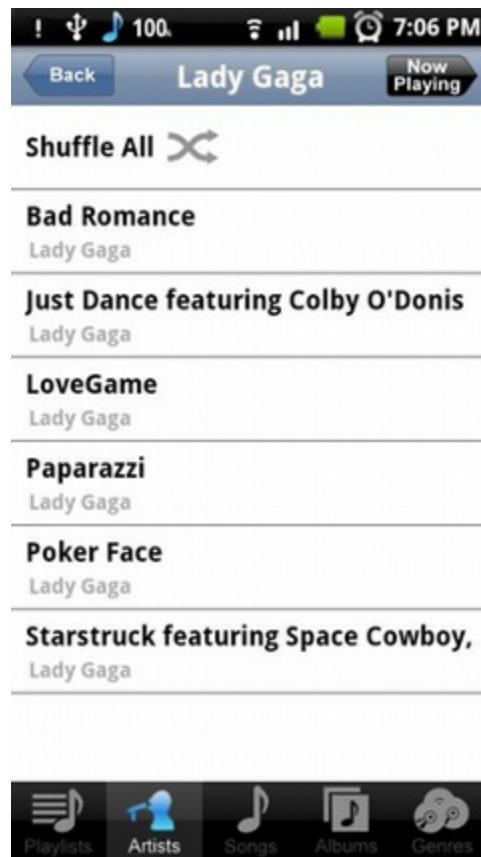
Music Mod's Much Prettier Playing Screen

(Android 2.2 only) Music Mod is a true *replacement* for Android's Music app. The first time you launch Music after installing Music Mod, you'll be asked if you want to use Music Mod as the default music player from now on. And you should, because it does everything Music does, then a little bit more.

Most noticeable up-front is bigger album art, the background that matches your home screen, and a true full-screen mode that even covers your Notification Bar. There's gesture control for skipping around tracks and turning on shuffle/repeat modes, and if you're into the whole oversharing thing, you can have Music Mod update your Twitter account with what's playing.

Neatest of all, though, is the huge range of home screen widgets that Music Mod provides, in different sizes and with different features included. If you're lucky enough to be updated to the latest Android release, it's worth trying out. (Free through Market)

bTunes Music Player



The Very Familiar Look of bTunes

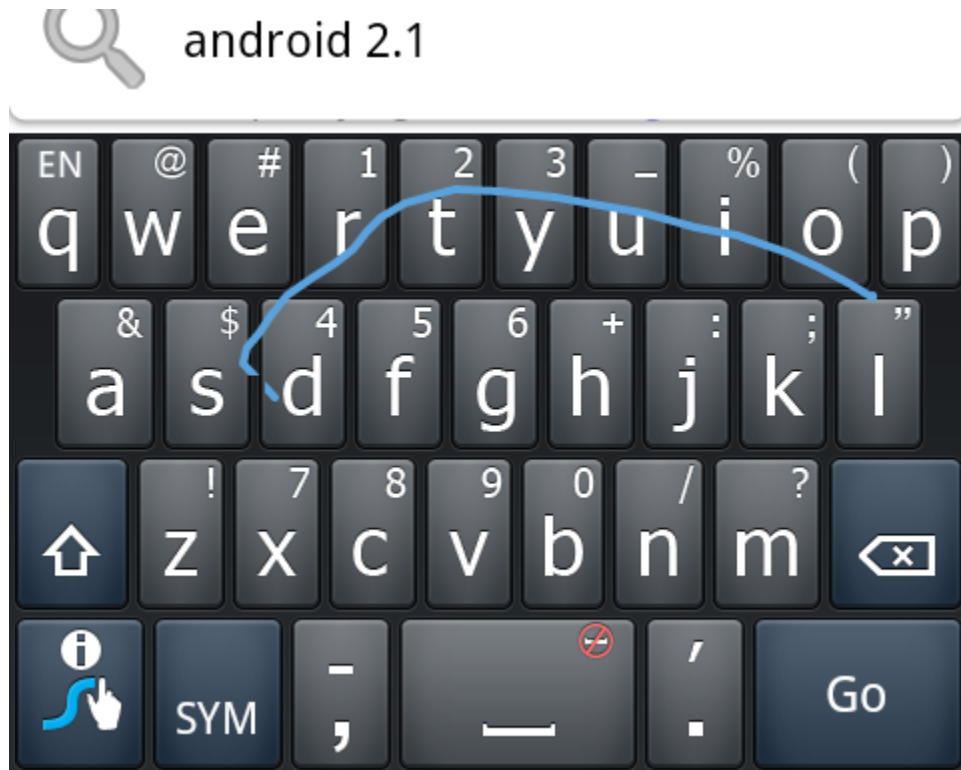
One common complaint of iPhone-to-Android switchers, or those who would never consider switching, is that it's hard to beat the iPod/iPhone interface for music. If you agree, bTunes Music Player does its best to sympathize. It's basically a carbon-ish copy of Apple's music interface, forward/back buttons and all.

Sure, the icons are changed up enough to (maybe) fend off the lawyers from Cupertino, CA, but it's a pretty remarkable simulation of the iPod experience. That's probably a very great or terribly sad thing, depending on your software alliances. (\$1.49 through Market)

Keyboards

Note: The process of installing, configuring, and setting alternative keyboards as your default is covered in the chapter on [Keyboard and Voice Input](#)

Swype



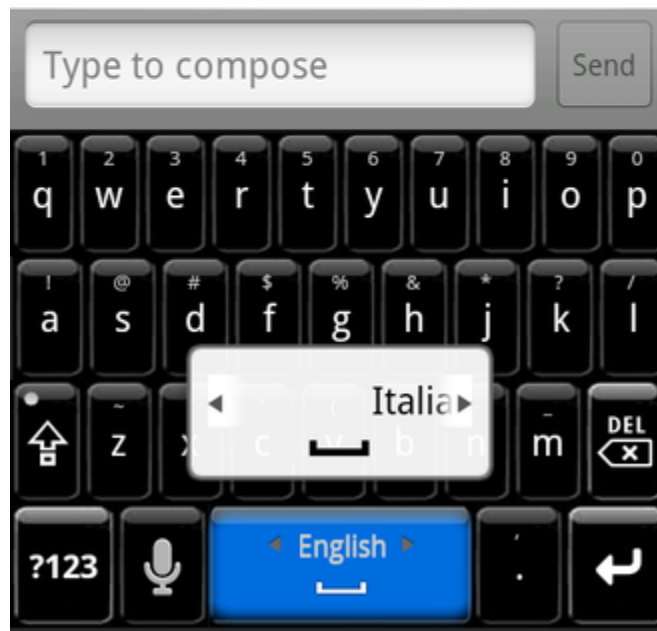
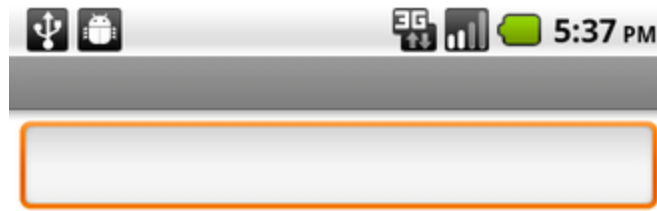
Trailing Your Finger Instead of Tapping

Swype has the biggest name recognition among the alternative, gesture-based Android keyboards (as relative a complement as that may be). And for good reason--it sports what most consider the best performance among the slide-based keyboards, and has the most customization and configuration options.

Run a single finger over the keys that you'd normally tap to spell out a word, and Swype's engine takes a good guess at what your were trying to say. If there are a few options, you'll get a pop-up dialog with your choices. For double letters (like, say, the two "t"s in "letter"), just bounce your finger quickly on the key.

Swype is, at the moment, a beta product that its developer hopes to pre-sell to phone makers, so that it's installed by default on certain Android phones. Then again, the popular response has been positive, so look for this to make its way to the Market, too. (Free in beta, when available, through [Swype's web site](#))

Better Keyboard

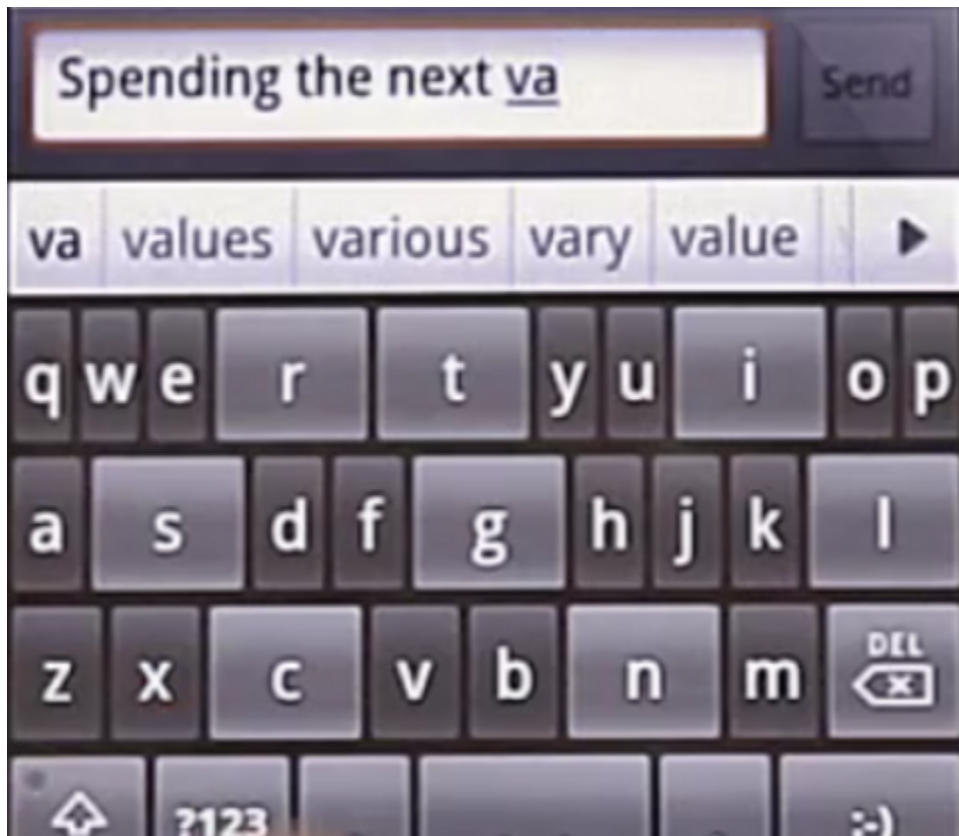


Better Keyboard's Familiar-but-Different Layout

Better Keyboard *looks* like the stock Android keyboard, but only until you start customizing it. Special characters are easier to get at, languages are easier to change, and the voice input button, unlike many stock keyboards, is front and present. Where the Better apps really stand out are their customizations and skins--the Market is chock full of color schemes, fan skins, and other tweaks you can

make to your Better keyboard. The basic app is \$2.99 in the Market, and certain skins and other customizations vary in cost.

ThickButtons



Thick Buttons Helps Find the Next Letter Faster

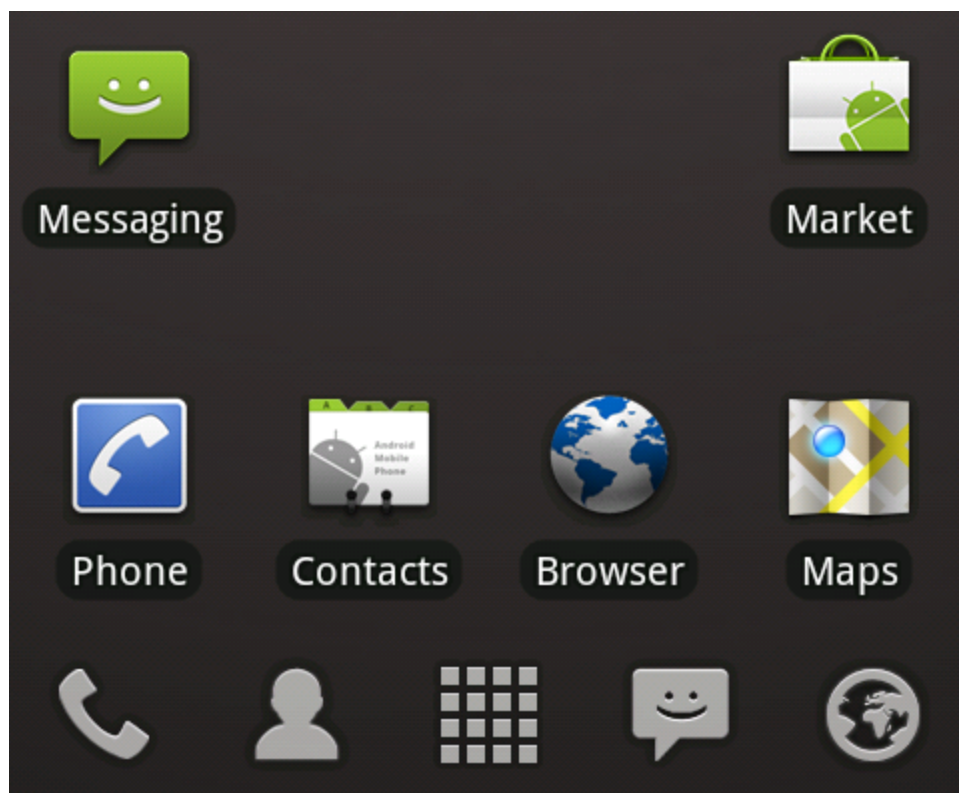
It's a work in progress, and the developers admit as much. Still, ThickButtons is a pretty cool concept for helping out those who do hunt-and-peck typing on their Android. As you start to type out a word, ThickButtons uses a predictive database of words to enlarge the size of the letters that are most likely to come next. Type out "T-H," for example, and the R, E, I, O, and A keys get a little bigger, with the E being the largest of all, because you're more than likely typing "the" or "there" or something akin. (Free)

Home Screens and App Launchers

Why replace your home screen? For one thing, certain third-party "launchers" can run a bit faster than many phone's stock interfaces. And if you've got a great phone but don't exactly love the custom interface your manufacturer plugged into it, these launchers can give your Android a different look.

After installing one of these home screen "replacements," you'll see a prompt the next time you press your Home button, asking if you want to use the Launcher or your new app to handle the home screen. To take your new home for a test drive, check the "Use by default" box, then pick your new app. Don't worry--you can always head into the Applications section of your Settings, find the app you installed, then hit the "Clear defaults" button.

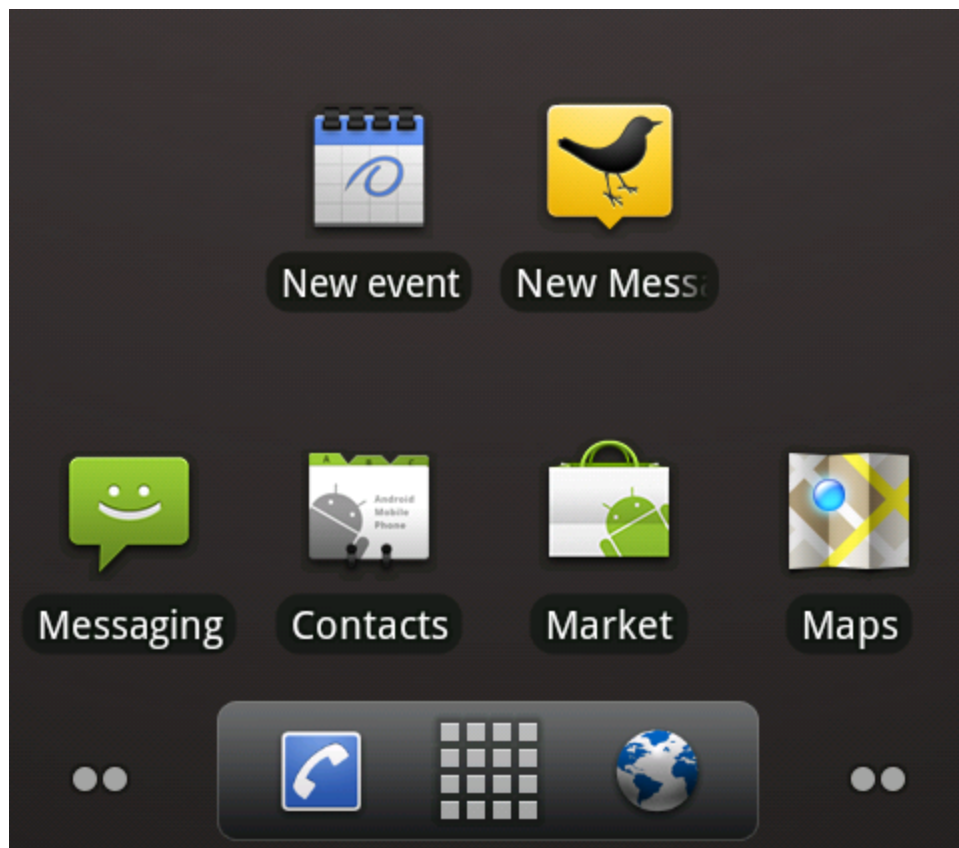
LauncherPro



Launcher Pro's Customizeable Homes Screen

LauncherPro expands the bottom-most section of your home screen, adding icons for calling, contacts, messaging, and the browser, in addition to the standard App tray (which gets a new animation). You can also create shortcuts to specific sections of an application--the "new message" part of your email, for instance, or a certain list view in a to-do app. The big, flashy new things are the LauncherPro widgets--which require the \$2.99 paid version, but add quite a bit of shortcut convenience to your home screen.

ADW.Launcher

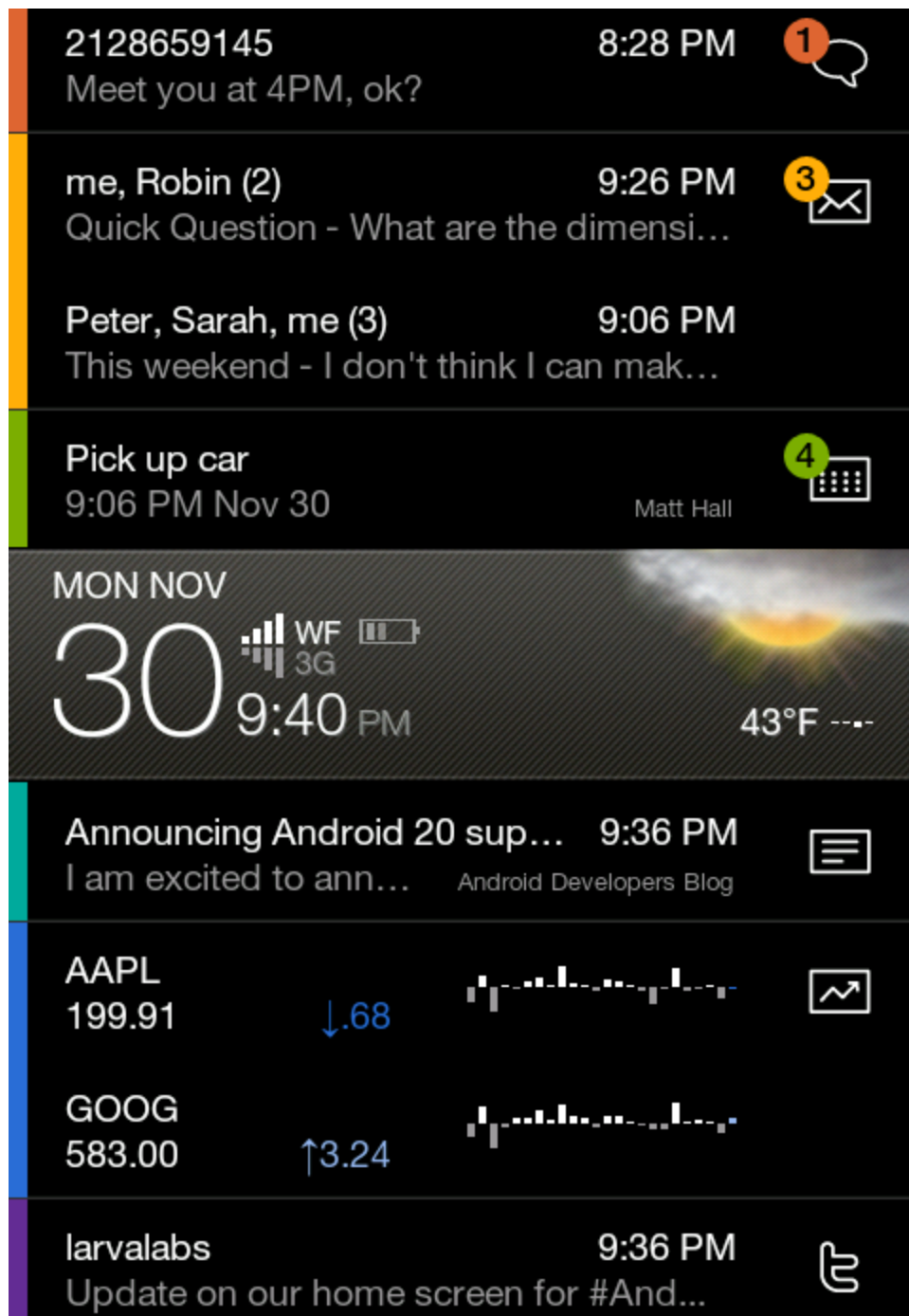


ADW Launcher Allows for More Specific Shortcuts

Like LauncherPro, ADW.Launcher allows for custom shortcuts to specific sections of your applications for convenience. The launcher section is kept to look like the standard Android launcher, but the

buttons on the bottom sides now show Mac-style thumbnails of all your home screen panels when you hold and press on them, or when you press the Home button while centered on the home screen. Your home screen also responds to orientation changes, so you can view your app shortcuts sideways, and the app tray switches from a vertical scroll to side-swiping panels. (Free, with donations requested).

Slide Screen



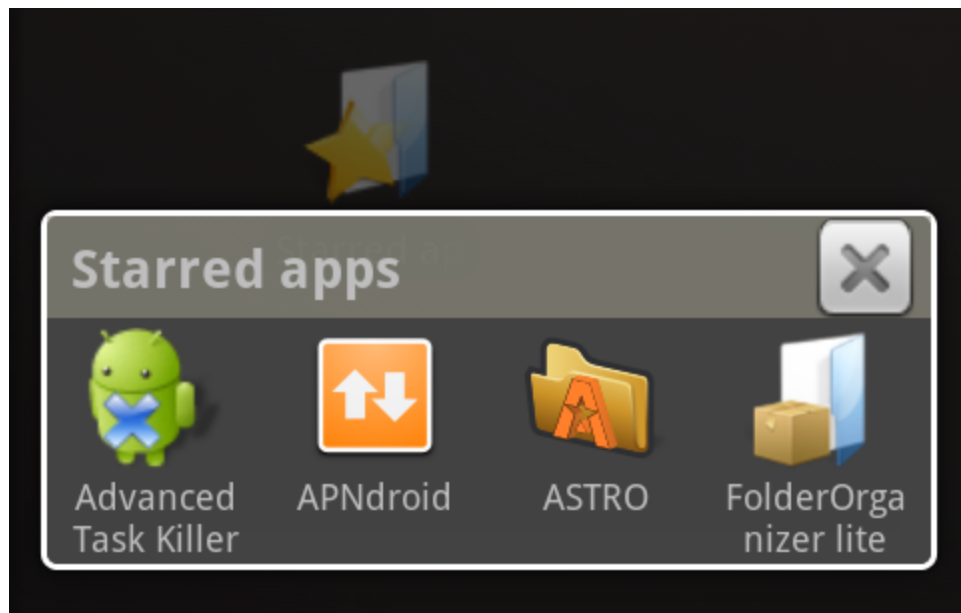
SlideScreen Provides All Your Data Streams on Your Home Screen

Some folks like to launch apps from their phone. Others want to get at the most recent or important incoming information, right away. For those in the second column, there is Slide Screen. Slide Screen replaces the icons/widgets/desktop model of your Home Screen with a sliding column of SMS, Twitter, Facebook, email, stocks, to-dos,

and other streaming data, and a central bar that always has the weather, battery status, time and date, and connectivity info. It's a pretty neat place to spend some time, and the developers are constantly adding new streams and functionality. (Free with small ads at bottom, \$7 for ad-free Pro version).

Folders and Widgets

FolderOrganizer



Organize Apps and Folders with FolderOrganizer

FolderOrganizer and its sister app, AppOrganizer, aren't really replacements for Android's built-in folder system. They work from an entirely different system, and it's one that's likely easier for power users to get into. You can create shortcut icons and widgets that link to a pop-up screen of apps you've "starred," your most recently used apps, most frequently contacted people, apps with labels you've created yourself, and other schemes. You can also use the Organizer apps to create custom icons for any of your standard

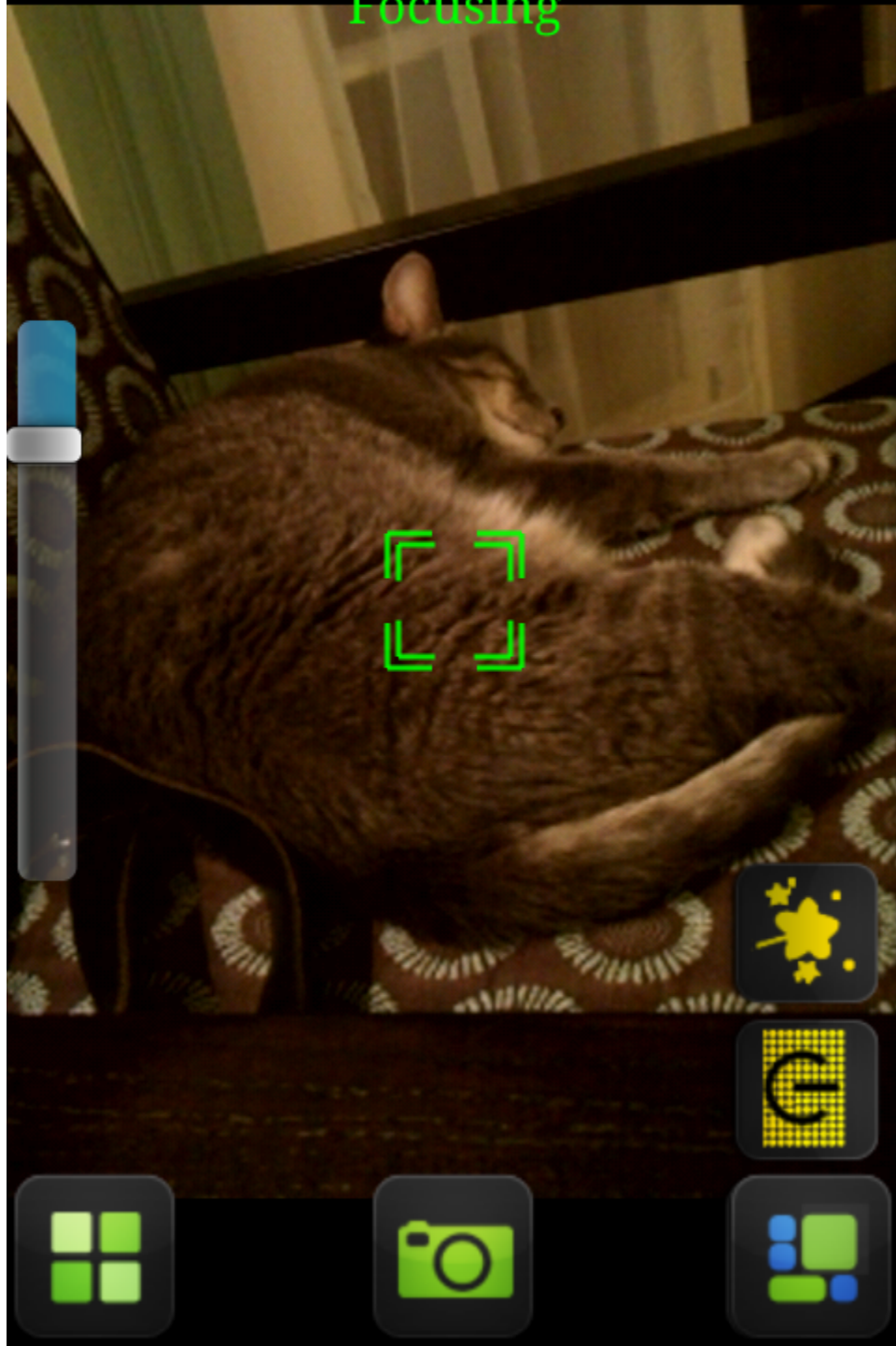
apps, which in itself is uniquely helpful goal. (Free, with paid version, one British pond, freeing up more features).

Camera

Camera 360

Special Effect Mode[Reversal Film - H

Focusing

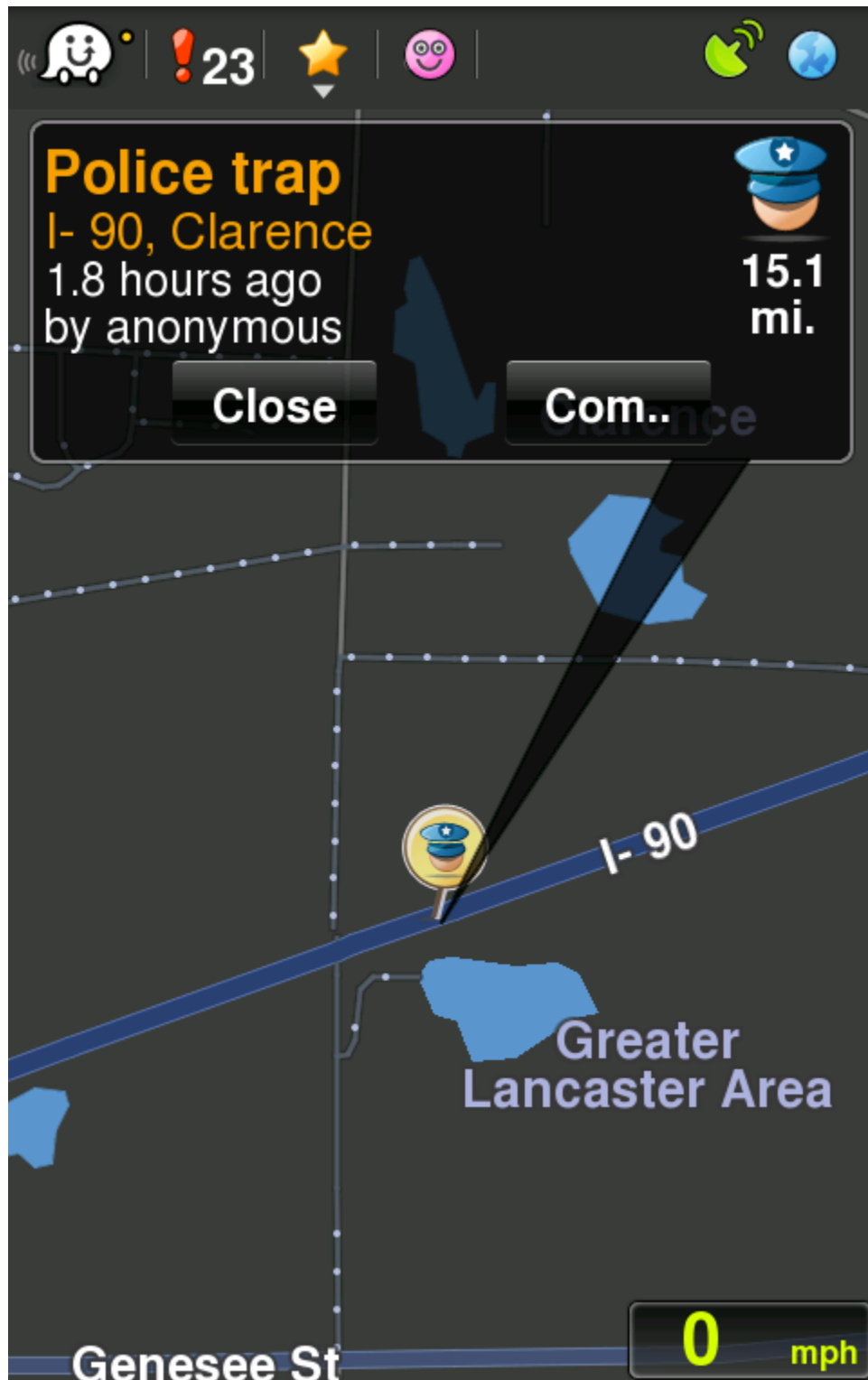


Camera 360's Post-Shutter Editing Options

Camera360's actual shooting interface is pretty easy to get down, but it's the effects it puts on photos, showing up after the shutter click, that make it different. HDR-style enhancements, black and white, aging effects you can set to certain time periods, high-contrast reversal film--and the list goes on. There are tilt-shift effects for shooting miniatures, grids for getting your central focus just so, and many more photo geek favorites. (Free, \$4 for a Pro version with unlocked effects).

Maps and Navigation

Waze



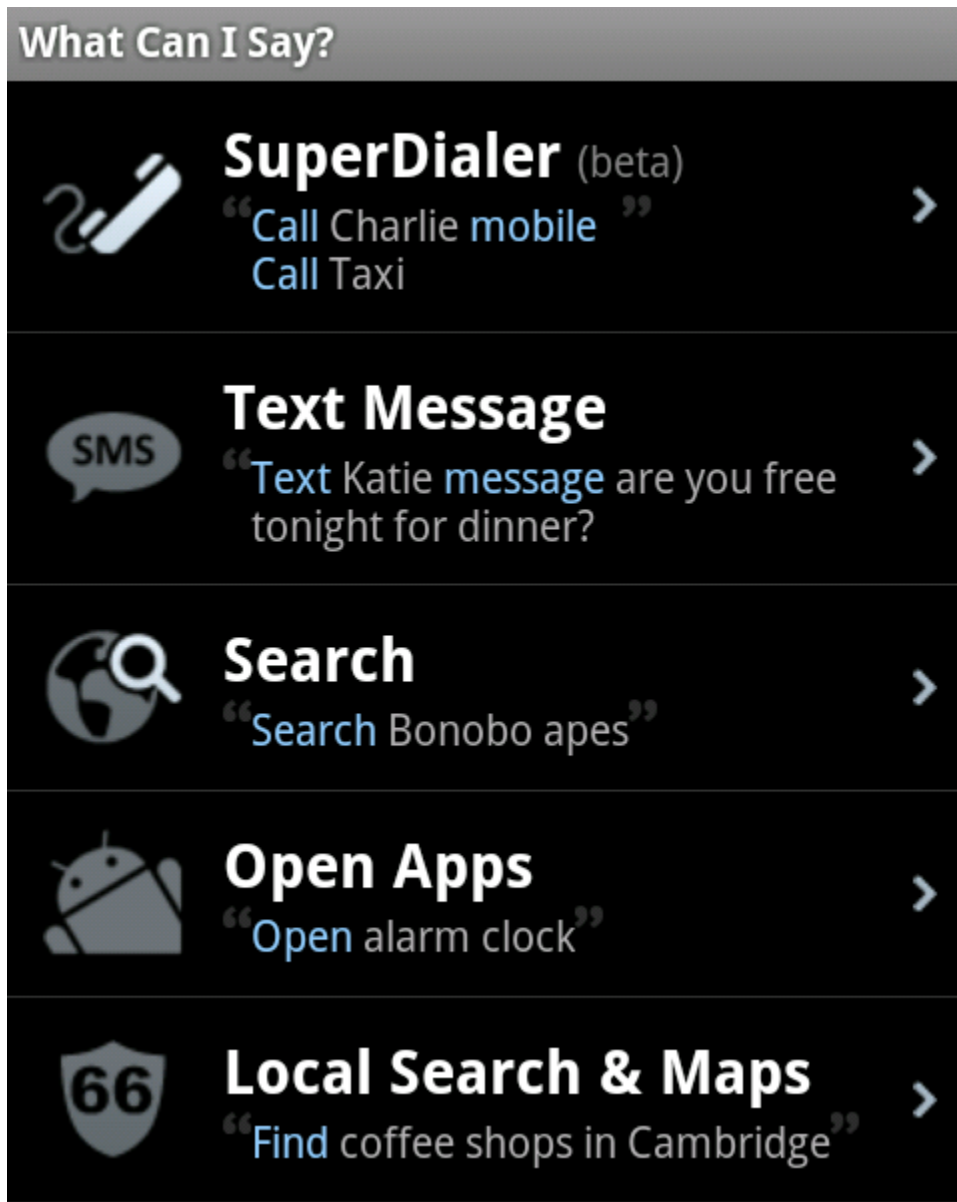
Waze Puts Crowd-Sourced Data in Your GPS Directions

If Google's own Maps and Navigation apps gets you where you're going, Waze gets you past the bad stuff and makes sure you notice

the cool stuff. The community-driven GPS app points out cool spots to check out, helps you avoid bad spots like the cops' favorite speed traps, and awards points for those who share their local knowledge. (Free)

Voice Search and Actions

Vlingo



Vlingo's Voice Options

If you're not running Android 2.2 yet and want some of Google's great Voice Action powers, you can get most of them, and even more, from Vlingo. This free app integrates tightly with your system, even taking over the result of holding down the Search button, if you let it, and offering a wealth of widgets. You can tell Vlingo to "Call Dave on Mobile," "Text Jim Message: Meet me at Sonic," "Find copy store in Charlotte," and much more. A bonus feature that's almost another app: SafeReader, a feature and home screen widget you

can enable to have your incoming text messages and emails read to you out loud, presumably while you're in the car. (Free)

Tutorials: Keyboard Shortcuts



T-Mobile G2, with Keyboard Extended

Not every Android phone features a physical keyboard with buttons to press, and not every keyboard is built the same. Still, for those Android phones with actual QWERTY, or "hard," keys, there are shortcuts that can launch apps, speed around text, and generally move faster than touching and tapping. Here are a few of the most helpful:

App Launching

Note that you can usually change your application shortcuts, and add new ones, from your phone's Settings. The setting is often found in a "Quick Launch" section.

- **Search + B:** Open browser
- **Search + C:** Open contacts
- **Search + E:** Open e-mail
- **Search + G:** Open Gmail
- **Search + I:** Open calendar
- **Search + M:** Open maps
- **Search + P:** Open music

- **Search + S:** Open messaging
- **Search + Y:** Open YouTube

Browsing

- **Menu + I/O:** Zoom in/out
- **Menu + J/K:** Move back/forward one page
- **Menu + R:** Refresh page
- **Menu + F:** Find text on page
- **Menu + B:** View bookmarks
- **Menu + H:** View History

Gmail

- **F:** Forward message
- **R:** Reply to message sender
- **A:** Reply-all to all recipients
- **Y:** Archive message
- **Menu + C:** Compose message
- **Alt + Trackball Up/Down:** Jump to top/bottom of inbox.

Scrolling

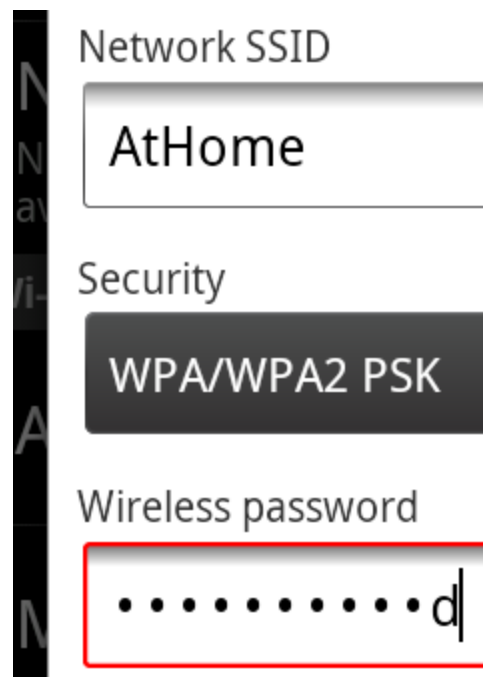
- **Spacebar:** Scroll one page down in a web page or document
- **Shift + Spacebar:** Scroll one page up in any web page or document.

Typing

- **Shift + Del:** Delete the character right of the cursor.
- **Alt + Del:** Delete entire line.
- **Shift (Press Twice):** Activate caps lock; press again to deactivate.
- **Alt + Trackball Motion:** Move cursor to the top or bottom of a page, front or end of a line.
- **Shift + Trackball:** Highlight text.
- **Menu + X, C, or V:** Cut, copy, or paste text on screen, respectively.
- **Menu + A:** Select all text on screen.

Tutorials: Save Your Android Battery

Use Wi-Fi When at Home or Office

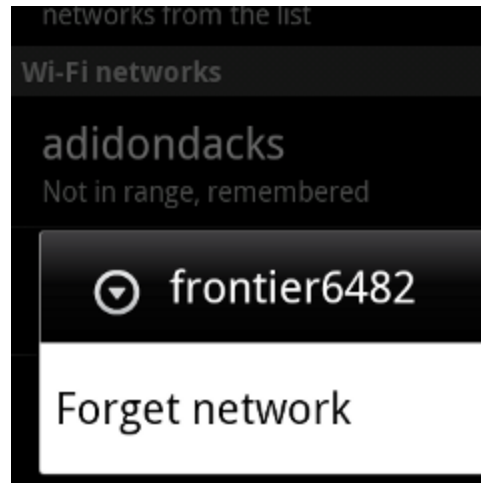


Wi-Fi Security Setup

In releasing its custom-designed Nexus One Android phone, Google gave the particulars on its hardware capabilities, including peak battery life. They suggested that the Nexus One could last a full hour and a half longer on a wireless internet, or Wi-Fi, connection, as compared to cellular 3G reception. The exact reasoning escapes this non-engineer, but it makes a general kind of sense—a phone negotiating with a wireless router 40 feet away, as opposed to negotiating data packet exchange with a tower clear across town. So when you're at home, or somewhere you know the connection is steady, turn on Wi-Fi from the Power Control widget (or one of your

phone maker's custom Wi-Fi toggle widgets; both Motorola and HTC offer them).

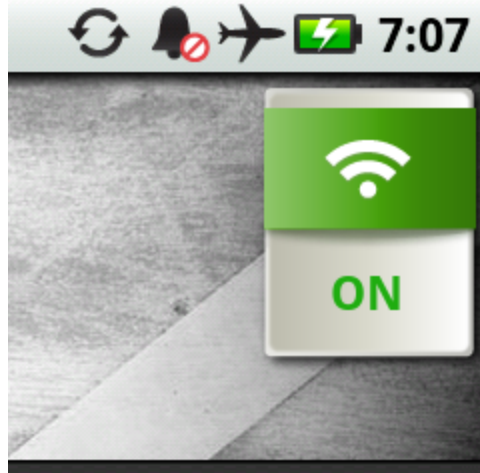
Turn Off Wi-Fi and Bluetooth When Wandering



Stopping Your Phone from Auto-Connecting

While having your phone use a Wi-Fi connection you know about can save battery, having it regularly look around for a Wi-Fi connection, or a Bluetooth device to pair with, can draw on your battery. Keep those capabilities off when you're away from your home or car for a while. And in your “Wireless & Networks” settings, head into “Wi-Fi Settings” occasionally, click the “Manage Networks” option, and clean out any old Wi-Fi networks you might have connected to once or twice—coffee shops, in-store Wi-Fi, and so on, so your phone doesn't bother to look for them and try to connect when nearby.

Use Airplane Mode, with Wi-Fi, When Cell Service is Weak or Gone

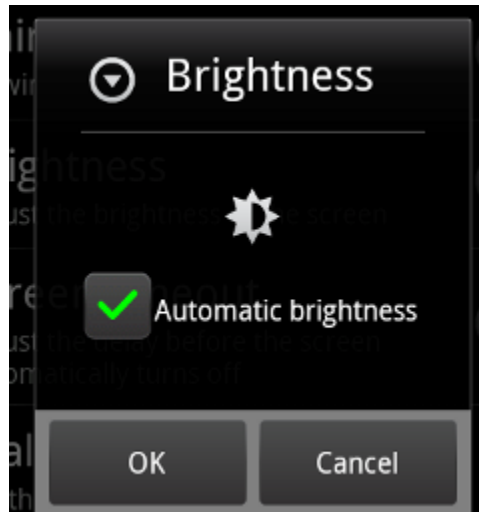


Airplane Mode Widget on Droid phone

Once in a while, you may find yourself somewhere with very sparse or non-existent cellular service, such that your signal indicator shows an “X.” When that happens, your phone will keep looking to reconnect with your cellular provider, and that will decidedly drain your battery—it always has, since the very earliest cellphones. Turning on “Airplane Mode,” by holding your power button a few seconds and pressing the on-screen option, will keep your phone from trying to connect, and it's easy to turn back off.

The great thing about Airplane Mode, at least in newer (2.1 and up) Android phones, is that it still allows Wi-Fi connections, even if it disables them temporarily. Go ahead and start your Wi-Fi back up, and keep your data in sync.

Set Automatic Screen Brightness and Lower Display Time-Outs

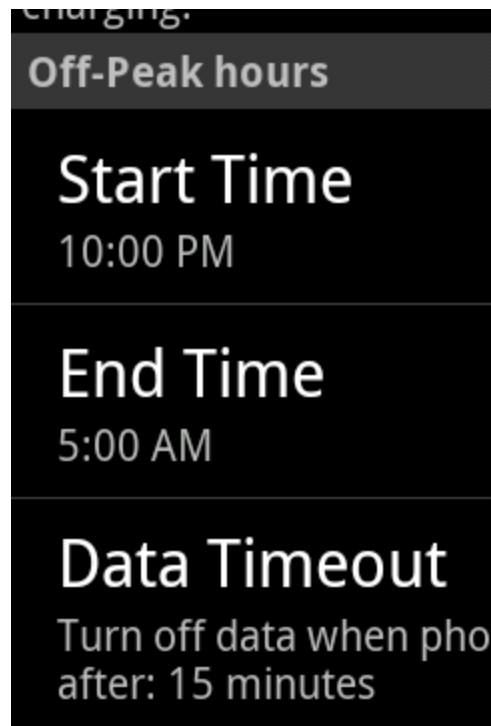


Letting Your Light Sensor Control Your Screen

Head into your phone's Settings, scroll down to “About phone,” then press the “Battery Use” option (on a Droid, there's often a separate “Battery Manager” entry in Settings). Look at what's been using your battery most since you last powered down, and Display is likely right up there, if not the very top item. Especially on modern phones with big, bright displays, keeping your screen on full power for minutes at a time is like owning a very, very elaborate flashlight with a tiny battery.

To scale back on your battery use, get to the “Display options” (or sometimes “Sound & Display”) section of your Settings. Under Screen Timeout, roll the number back to something like one or two minutes, so your phone isn't burning life for the rare cases when you want to stare at it and do nothing. The screen won't time out when playing video, slideshows, or games, so you've usually got very little to lose. In the same settings, if you're running at least Android 2.2, click the “Brightness” control and check the box for automatic brightness, or click on the brightness setting on your Power Control widget until the small light icon has an “A” in the middle.

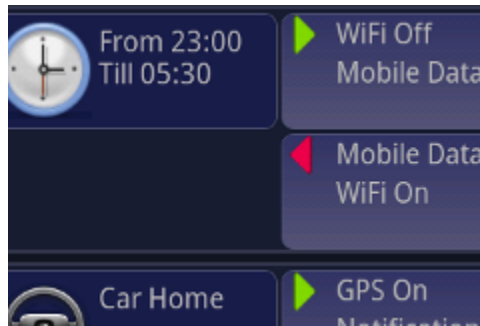
Take Advantage of Motorola's Battery Profiles



Setting Data Timeout for "Off-Peak hours"

On Motorola's latest Droid model phones, there's a "Battery Manager" option inside the Settings that's well worth checking out. Within that option, you can set your "Battery Profile" to Performance, Smart, or Battery Saver mode. The first and last options are just what they sound like—speed with no battery consideration, and battery preservation at the cost of performance and convenience. "Smart Mode" is where it's at. You can set an "Off-Peak hours" time span—10 p.m. to 5 a.m., by default—in which cellular data connections are turned off if haven't used your phone in the last 15 minutes (or longer, if you'd like). You can also set the same kind of data timeout during "Peak hours," for intervals ranging 15 minutes to one hour, so that your data turns off if you haven't touched your phone in some time.

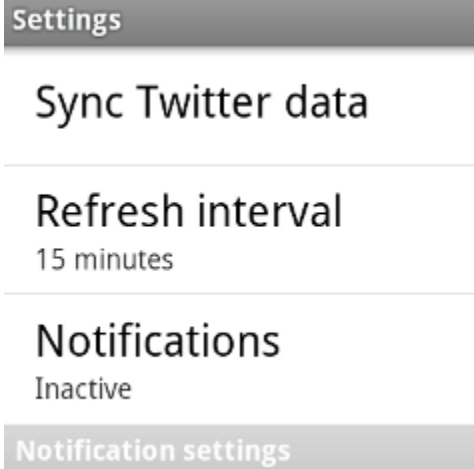
Set Your Own Battery Profiles with Advanced Apps



Tasker Profile for Nighttime Data Limiting

If you're not rocking a Motorola Droid phone, you can still get in on some handy automated battery powers. Paid apps in the Market, like Locale and Tasker, allow you to set up exceedingly personal profiles that turn your cellular data, Wi-Fi, background syncing, and other tasks on or off under nearly any circumstance you'd like. There are also free or “lite” apps in the Market, like JuiceDefender and APNdroid, that can turn your cellular data off, even if your carrier doesn't give you a standard means to do so. You can use your phone's location sensors turn Wi-Fi turn off when you leave home, make data only switch on every often at night, or have Bluetooth only turn on when you've got your phone docked in your car. Each app will require a little exploration on your part, but most have very detailed instructions at their web sites.

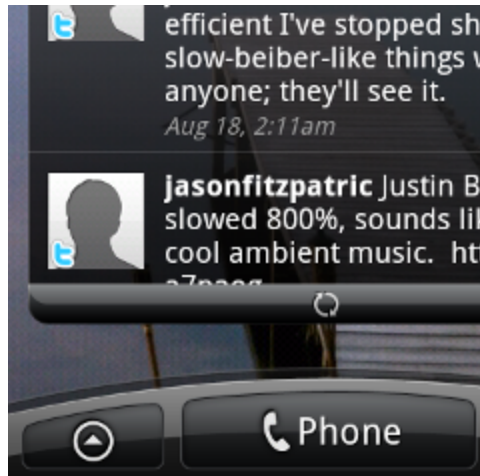
Change Your Apps' Sync Settings



Setting an App's Sync Timing for Better Battery

Beyond Google's own applications, which do a quiet kind of server-pushing background sync, there are apps on your phone that do your own reaching out to check for new stuff. Facebook, Twitter, podcast grabbers, to-do managers—they're all very intent on being up-to-the-minute, even if that's not strictly necessary. It's worth your time to open up the apps that push you notifications about new things, hit the Menu key, and find their Settings. Inside, you'll likely see at least a "Refresh Interval" you can modify, along with possibly some options about what and how much gets synced. Facebook, for instance, I'm very happy to let sit for at least one hour between checks.

Pare Down Your Updating Widgets



Considering Removal of Auto-Update Widgets

Just like many apps will constantly try and keep you notified with new stuff, there are widgets you can place on your home screen that, while potentially convenient, can also be a big power draw. Consider which widgets you actually check every day for information you need, and which just kind of make your phone feel futuristic and cool. Social network widgets that connect to Facebook, Twitter, Flickr, and other apps are the biggest culprits, but if you're going to go all the way, consider your weather widget—or even the weather contained in HTC's big flip-down clock widget, installed in the top center of most HTC phones. Do you really need a constant check on the weather right where you're standing, especially if you could free up six app shortcut spaces without it? Press, hold, and drag the app to the trash, then create a shortcut to a Google search for the weather in your area (“Weather 14201” where I live). The shortcut creation for a bookmark is described in detail in the Home Screen chapter.

Acknowledgements

Many thanks to: Gina, who quietly shoves people into making great things and things greater; Kelly, Trish, Devon, and the whole 3Ones crew; Adam, Jason, Whitson, Lowell, and all the Lifehackers; Sweetness 7 Cafe, Spot Coffee, Comfort Zone Cafe, the Buffalo & Erie County Public Library, and any place in Buffalo with generous Wi-Fi; the Great Lakes Brewing Co. & Keurig/Green Mountain Coffee; Groove Salad, WEFUNK, and other great streaming web stations; the makers of Google Docs, GIMP, OpenOffice.org, MindTouch, and Dropbox; Cork and Apricot; Android Guys, Android and Me, Androinica, Android Central, Phandroid, and other enthusiastic Android blogs; and all the friends who bought Androids, had questions, and inadvertently brainstormed a book.